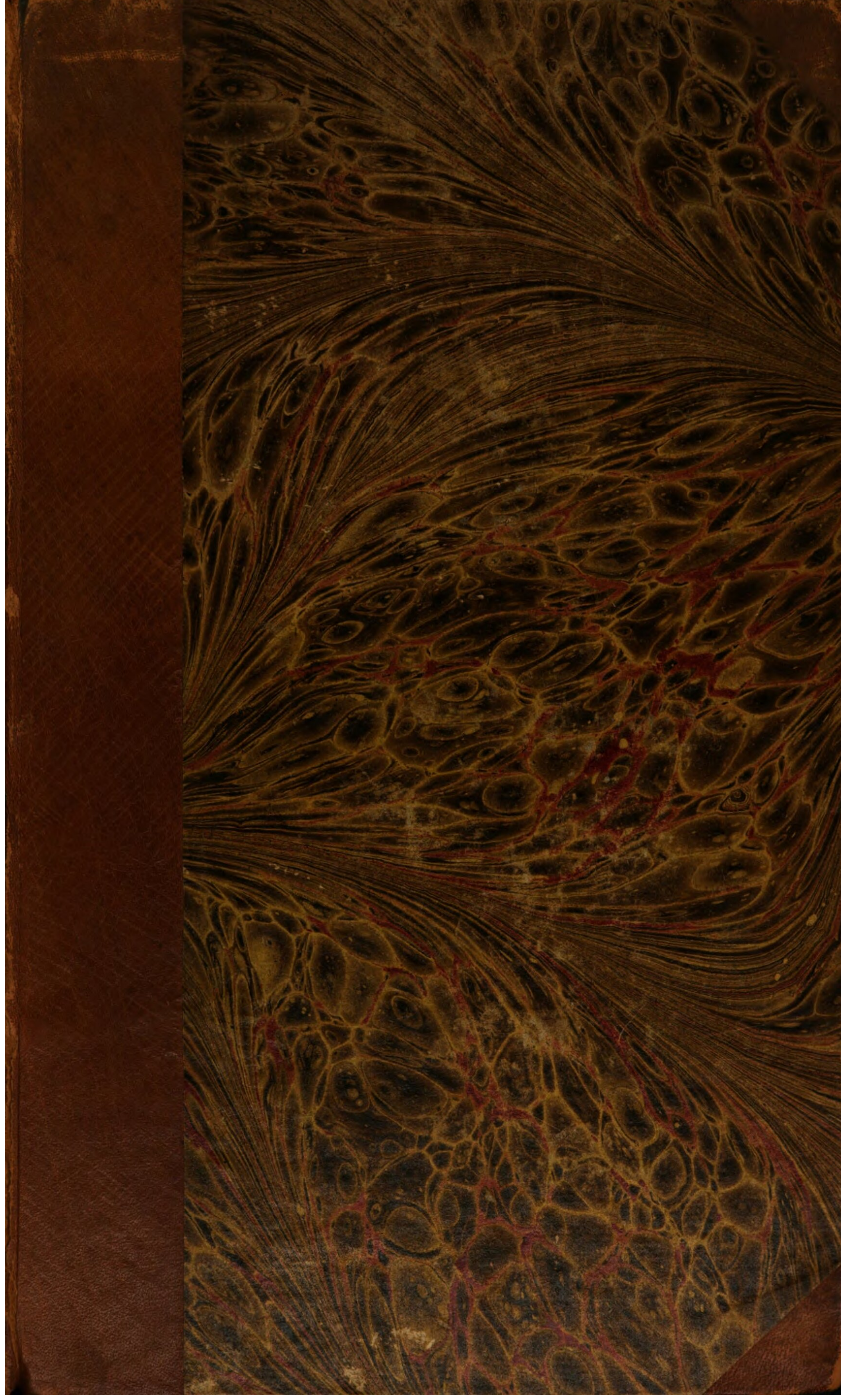
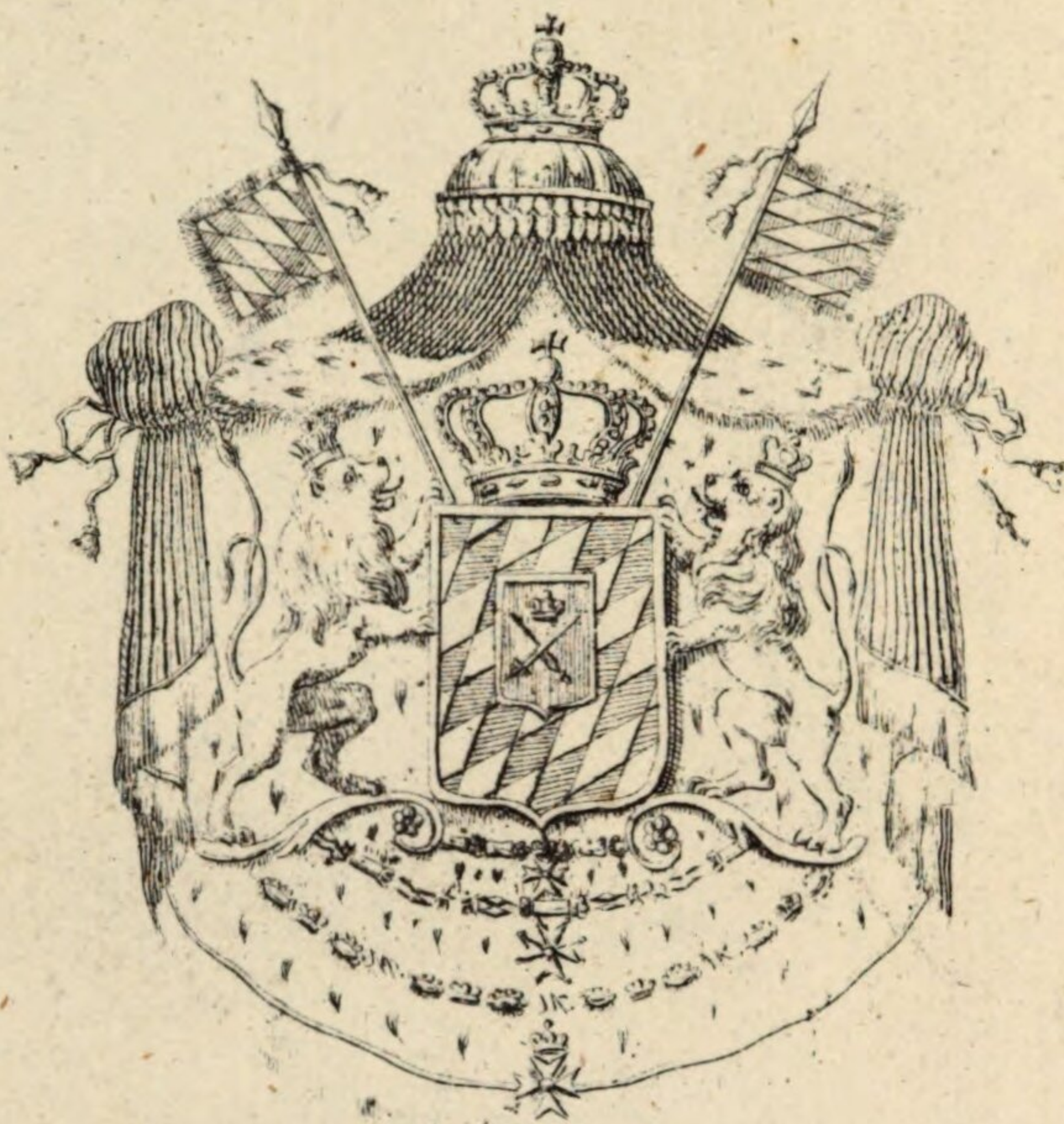




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THE
ZOOLOGICAL MISCELLANY;
BEING
DESCRIPTIONS OF NEW OR INTERESTING
ANIMALS,

BY
WILLIAM ELFORD LEACH, M.D. F.R.S. & L.S.

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH, AND OF THE ROYAL COLLEGE
OF SURGEONS AND MEDICO-CHIRURGICAL SOCIETY OF LONDON; MEMBER OF THE WERNERIAN
NATURAL HISTORY SOCIETY OF EDINBURGH; CORRESPONDENT OF THE PHILOMATIC SOCIETY
OF PARIS; MEMBER OF THE SOCIETY OF THE FRIENDS OF NATURAL HISTORY OF BERLIN;
HONORARY MEMBER OF THE PHILOSOPHIC SOCIETY OF LONDON, ETC.

ILLUSTRATED WITH
*COLOURED FIGURES, ENGRAVED FROM
ORIGINAL DRAWINGS,*

BY R. P. NODDER,
ANIMAL PAINTER, DRAFTSMAN, AND ENGRAVER IN NATURAL HISTORY.

VOL. III.

LONDON:

PRINTED BY R. AND A. TAYLOR, SHOE-LANE,
FOR R. P. NODDER, 34, TAVISTOCK-STREET, COVENT-GARDEN;
AND SOLD BY ALL BOOKSELLERS.

1817.

ZOOLOGICAL MISCELLANY;

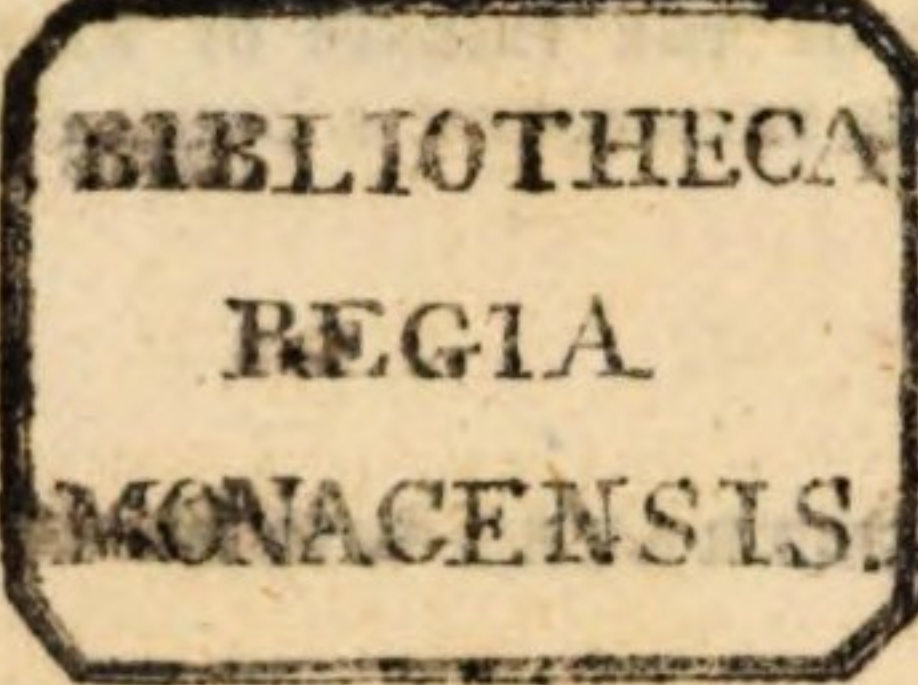
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- Pag. 19, lin. 15, *post* "angustiore" *adde* "cauli interiore sensim angustiore exterioris longitudine."
 20, lin. 13, *pro* "tuberosa" *lege* "tumefactus."
 81, lin. ult., *pro* "Gleunium" *lege* "Chennium."
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 — lin. 22, *pro* "Calcarii acuminati simplices" *lege* "Calcaria acuminata simplicia."
 109, lin. 18, *pro* "Darent" *lege* "Combe."
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THE
ZOOLOGICAL MISCELLANY.

I. *On the Characters of the European Species of the Genus Rhinolophus, commonly named Horse-shoe Bats.*

RHINOLOPHUS.

RHINOLOPHUS, *Geoffroy-St.-Hilaire, Duméril, Cuvier.*

Dentes incisores superiores 2, simplices, minuti, in os præmaxillare subcartilagineum distanter inserti: *inferiores* 4, approximati, trifidi.

laniarii in utraque mandibula 4.

molares in utraque mandibula 10.

Nasus foliis duobus: posteriore erecto.

Aures liberæ.

Cauda elongata, cum pedibus posticis membrana connecta.

Mammæ, 2 pectorales, 2 inguinales.

The most remarkable character, as Geoffroy has observed, is the presence of the inguinal teats, which are situated one on each side of the vulva.

Geoffroy-St.-Hilaire, to whom naturalists are indebted for a most excellent series of dissertations on the classifications of Bats, has overlooked the two anterior grinding

teeth of the upper jaw, which, although small, are very easily seen.

The following European species* were discovered and admirably distinguished by Daubenton, who was well acquainted with their common and specific characters.

Sp. 1. *Rhinolophus Ferrum-equinum*.

R. molari superiore antico minimo simplici truncato, laniariis simplicibus.

Vespertilio Ferrum-equinum *auctorum*.

Vespertilio Hippocrepis. *Herm. Observ. Zool.* 18.

Rhinolophus uni-hastatus. *Geoff. Ann. du Mus.* 20. 265.

Habitat in Europa gregarius.

This species is common in France; and is not unfrequently found in the caverns which occur in the limestone near Plymouth, and on the southern coast of Devon.

Sp. 2. *Rhinolophus Hipposideros*.

TAB. 121.

R. molari superiore primo acuto; basi antice et postice denticulo armato, laniario superiore antice dente instructo; inferiore simplici.

Vespertilio Ferrum-equinum β . *auctorum*.

Vespertilio Hipposideros. *Bechstein*.

Vespertilio minutus. *Montagu Trans. Linn. Soc.* 9. 163.

Rhinolophus bi-hastatus. *Geoff. Ann. du Mus.* 20. 265.

Habitat cum præcedente gregarius.

* I have never had an opportunity of examining the Egyptian and Indian species that have been referred to this genus by Geoffroy-St. Hilaire, but strongly suspect that their lower incisor teeth are single and not trifid.



Montagu was mistaken in asserting that this species wanted the incisor teeth in its upper jaw: they are certainly not very visible; but may always be found if the integuments be removed with care.

It is a very cautious animal; very easily tamed, but fond of concealing itself. It frequents the higher parts of the caverns in which it occurs, and probably flies higher than the preceding species.

II. Generic Character of *Elanus*, a Genus of Birds, with a Description of a Species.

ELANUS.

"ΕΛΑΝΟΣ *antiquorum*.

ELANUS. *Savigny, Vieillot.*

FALCO (Milvus). *Cuvier.*

Rostrum parvum valde compressum, angulo dorsali arcuato: *cera* semihispida, brevis: *nares* magnæ, ovales, lobo membranaceo instructæ: *os* ad oculos fissum: *mandibula superior* margine tenui integro, palato molli; *mand. inferior* apice oblique truncata.

Tarsi brevissimi, squamis parvis subæqualibus instructi, basi pennati: *digiti* crassi, liberi; intermedio paulo longiore, phalange primo brevissimo: *ungues* magni, inæquales, arcuati, acutissimi, glabri; interiore et posteriore longioribus, illo latere interno longitudinaliter elevato.

Alæ longissimæ, acuminatæ; remige primo secundo brevior; tertio primo paulo longior; quarto præcedente abrupte brevior; remigibus sequentibus jusque ad quatuordecimum gradatim longitudine decrescentes.

Cauda mediocris paulo emarginata.

When I caused a figure of the following bird to be executed, I was not aware that it had been distinguished as a genus by my learned friend Savigny, or I should not have ventured to describe a bird after so eminent a naturalist.

It is more nearly allied to *Milvus* than to any other genus; but it may very easily be distinguished from it by the above characters, which are nearly the same with those laid down by Savigny.



From the collection of the British Museum

London

Elanus melanopterus.

TAB. 122.

E. plumbeus, subtus albidus, remigibus nigricantibus, rostro humerisque nigris, cauda albida, pedibus flavis.

Falco melanopterus. *Dand. Tact. d'Orn.* 2. 152.

Le Blac. *Le Vail. Ois. d'Af.* 1. 36. ♂ 37 junior.

Elanus caesus. *Savig. Ois. de l'Egypt. &c.* 98. p. ii. f. 2.

The black-winged Elanus, according to Savigny, is found in great abundance in parts of Syria, Egypt, and Barbary. A great number were observed, and some were sent home from the mouth of the river Congo by the late Mr. J. Cranch.

III. Notice of a Variety in the common Corvorant.

PHALACROCORAX CARBO.

It will be very unnecessary to mention the comparative marks by which the Corvorant is distinguished from the genus Pelican, with which it was arranged by Linné, although it had been well characterized by Brisson and other naturalists. My object is merely to call the attention of naturalists to the curious fact recorded by Montagu in the Supplement to his Ornithological Dictionary; namely, that the curious bird figured in the annexed plate is no more than a variety of the common Corvorant.

Montagu received, from Mr. Anstice of Bridgewater, a living specimen of the variety figured (Tab. 123.), and kept it for nearly two years, during which time it entirely lost the white on its throat, neck, and thighs, and assumed the plumage of the common sort; it is therefore proved incontestably to be but a variety of the *Phalacrocorax Carbo*, a species too well known to require any further notice in this place.





IV. *On the Characters of the Common Viper.*

VIPERA COMMUNIS.

This animal is found over the greater portion of the temperate parts of Europe, and is subject to such great differences in colour, that its varieties have been described as distinct species by several authors. I was led to suspect this to be the case at a very early period, and have therefore taken every opportunity of collecting specimens of each variety, with a view to clear up all doubts on the subject. During a long residence in the Western Isles, where this animal is found in the greatest profusion, I obtained a series of the intermediate varieties that most satisfactorily connect all the supposed species, and prove them to be but one,—of which the following is the character :

Vipera communis,

Squamis dorsalibus ovatis, linea elevata longitudinali ; squamis lateralibus inferioribus simplicibus subangulatis. Color cinerascens, griseus aut rufescens, lateribus nigromaculatis ; maculis utroque in lineam longitudinalem digestis, dorso linea nigra utrinque serrata, (e maculis rhomboidalibus confluentibus effecta) ; squamis ventralibus subcaudalibus intense plumbeis, rarius pallido-irroratis.

Variat dorso lateribusque intensè nigris aut perfuscis.

Huic speciei referendæ sunt species sequentes : Coluber, 1. Berus, 2. Chersea, 3. Aspis, 4. Prester *Linnæi*, 5. cæruleus, *Shepp.* (*Trans. Linn. Soc.* 7, 56.), et 6. rufescens aut rufus *Museorum Britannicæ.*

In plate 124 will be found a representation of that rare variety named *Prester* by Linné.

The number of scuta and squamæ, on which the specific characters of serpents were founded by Linné, vary in almost every individual of this and of every other species of serpent; and any one may satisfy himself as to the truth of this remark, by counting the number in a brood of the common snake of Britain, *Coluber Natrix*.



Dromenid frog. Published by R. P. Hoare, London, 1811.

V. *A Notice concerning the Gigantic or Great
Frog of Pennant.*

TAB. 125.

Naturalists frequently request me to show them the animal mentioned by Pennant in his Voyage to the Hebrides, p. 170, under the name of Gigantic Frog, and in his British Zoology as the Great Frog. In the first-mentioned work he refers it to the *Rana Bombina* of Linné, but in the other he gives no synonym whatever.

When I visited Arran, I made it a point to catch every animal of the family that occurred; and during my stay at Loch Ranza examined, in one evening, nearly six hundred that were taken by Mr. Hanson and myself on the shore of the salt-water lake. Amongst them, several varieties in colour were observed; many of which agreed so well with Mr. Pennant's description, as to satisfy me perfectly that we had found the animal in question, differing in no respect from the common Toad (*Bufo vulgaris*), which occurs in every part of Great Britain in tolerable abundance, especially in the moist woods of Devon and Cornwall; but nowhere in such plenty as in the deep glens of Arran, particularly near Ben-Ghaoil, and in the northern parts of that island.

The one figured was taken at Ranza; it has been compared with specimens collected in various parts of Great Britain, and differs in no respect from them.

VI. *Leptocephalus*, its Generic Characters, with a
Description of one Species.

LEPTOCEPHALUS.

LEPTOCEPHALUS, Gronov., Penn., Cuv., &c.
Corpus compressum, elongatum: *Caput* parvum; *Os*
dentibus acutissimis tenuibus distantibus instructum.
Pinnæ pectorales parvæ; *dorsalis* et *anal* ad caudam
coalitæ.

OBS. Corporis latera lineis angulatis impressis notata.

This genus is so little known to naturalists in general, that its existence has often been questioned. It was first discovered by Pennant, who sent it to Gronovius, by whom it was named *Leptocephalus**.

Sp. 1. *Leptocephalus Morrisii*.

L. ventre et lateribus utrinque linea e punctis nigris distantibus confecta notatis.

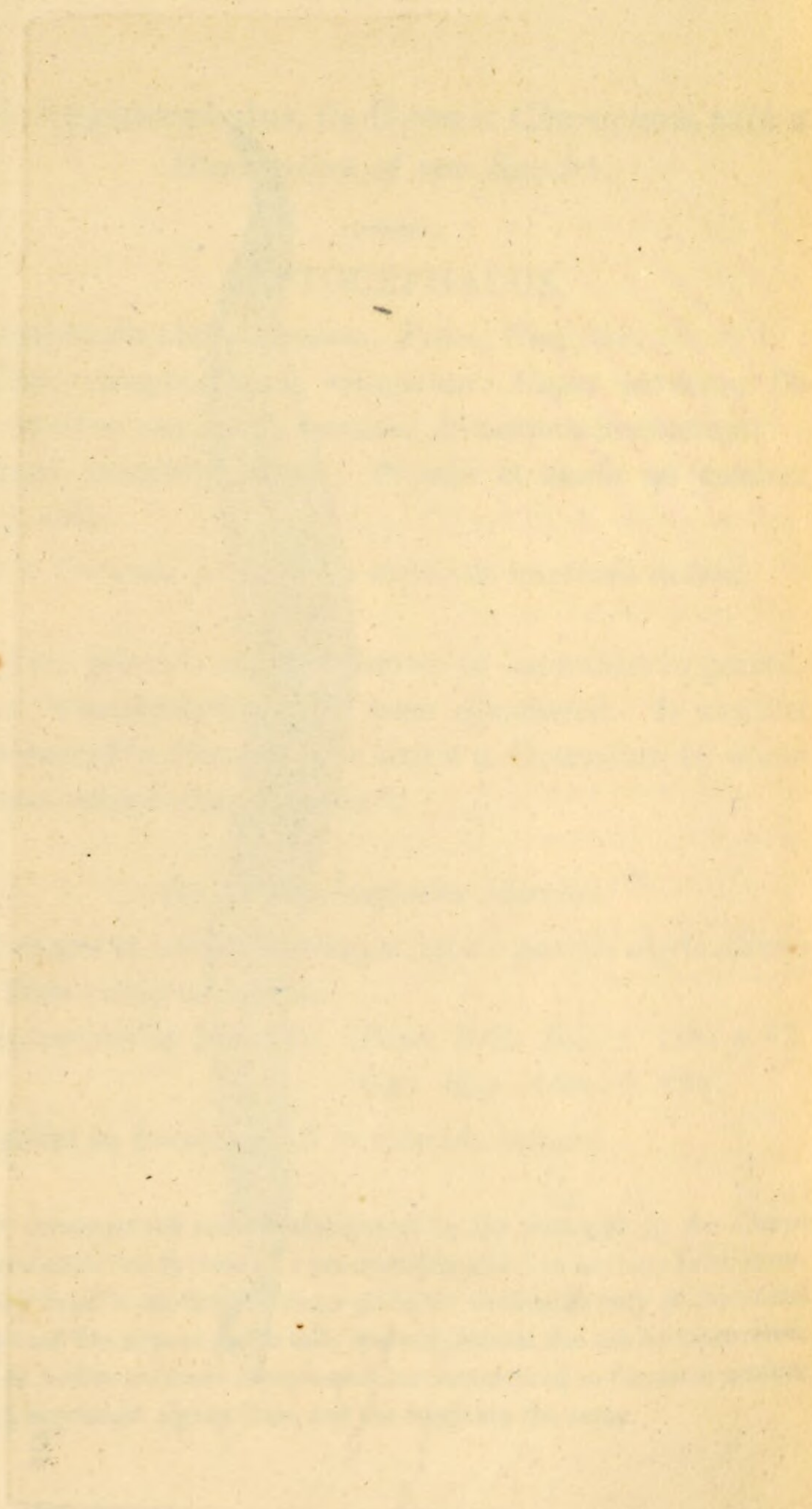
Leptocephalus Morrisii. Penn. Brit. Zool. 3. 158. p. 67.
Cuv. Reg. Anim. 2. 238.

Habitat in Europæ mari in æstuaria intrans.

* Amongst the animals discovered by the zoologist to the Congo expedition, two species of a genus nearly allied to *Leptocephalus* occur. Their head is smaller and more pointed: rudiments only of the dorsal and anal fins appear at the tail; and no pectoral fins can be discovered. Their bodies are more compressed, but are marked in the same manner with impressed zigzag lines, and the teeth are the same.



Supraea pinnatifida by R. P. Walker, Toronto & J. S. G. London



Pennant received his specimen of this fish from Mr. W. Morris, who found it in the sea near Holyhead. Our figure is taken from one of two individuals that were caught near Bridgewater by Mr. Anstice, and sent by him to Mr. Montagu.

The eyes still retain a considerable portion of that blue teint which was very strong whilst the animals were alive.

VII. *On the Characters of Matuta, with Descriptions of the Species.*

MATUTA.

MATUTA, *Dald., Fabr., Lam., Latr., Bosc, Leach.*

Testa subrotundata, utrinque spina elongata instructa.

Orbita postice bicrenata.

Oculi pedunculo haud crassiores: articulo secundo basi abrupte incrassato.

Mandibulæ edentulæ.

Antennæ interiores in foveolis transversis inter oculos et clypeum reflectendæ.

exteriorcs brevissimæ sub interioribus insertæ.

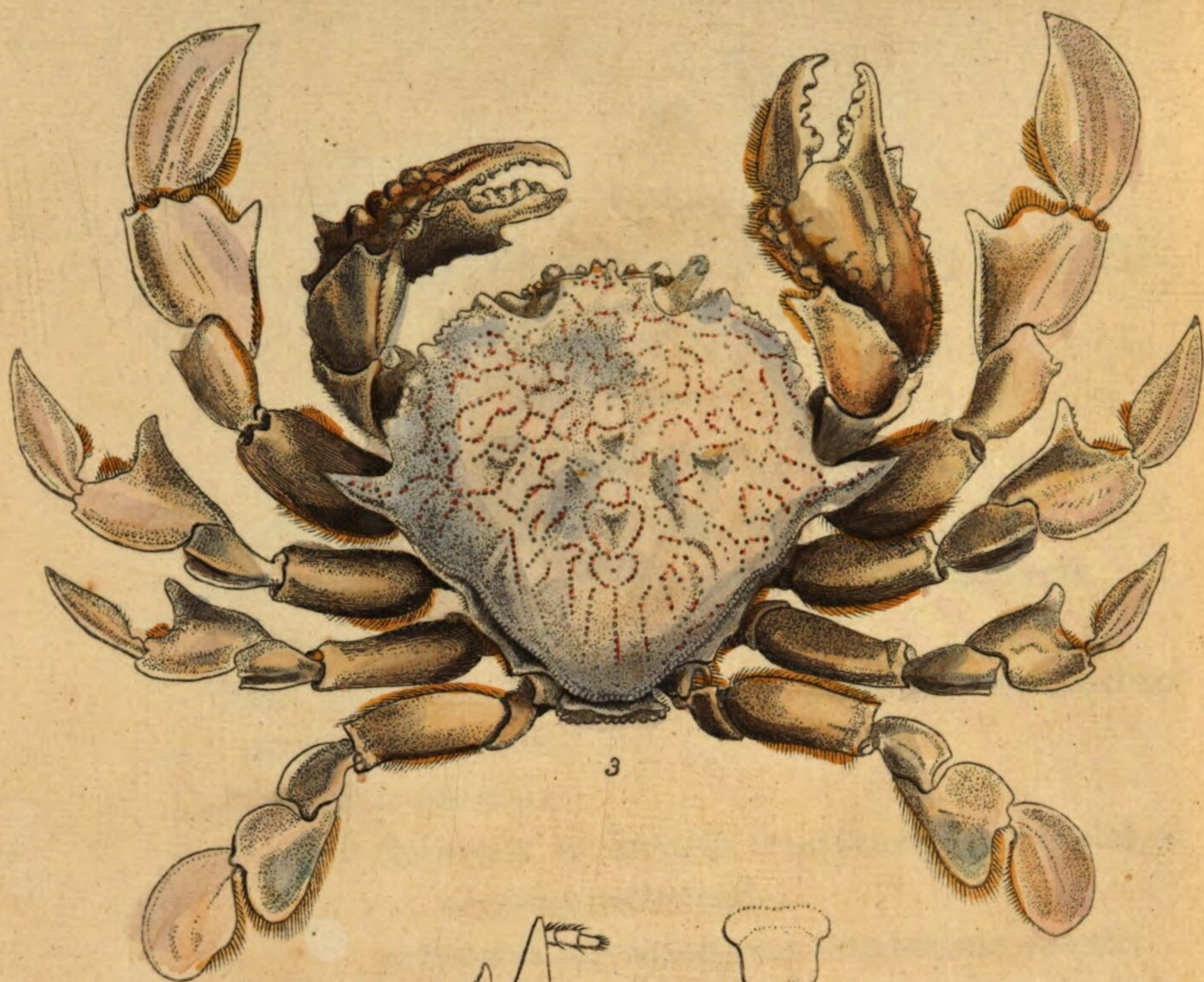
Pedipalpi externi caule interno sensim acuminato articulo secundo intus excavato palpigero: caule externo abbreviato acuminato.

Pedum par anticum subcristatum didactylum; paria 4 postica valde compressa natatoria; tertium et quartum ungue tenuiore instructa.

Abdomen 7-articulatum; MARIS articulis 3, 4, 5, coalitis: FÆMINÆ articulis 4 et 5 latioribus.

OBS. Femora quatuor postica articulo secundo saltem subtus spinoso. Manus extus tuberculatæ aut spinosæ. Pedipalpi externi basi saltem granulati.

The type of this genus is *Matuta Victor* of Fabricius; but as the characters which distinguish the species are very obscure, and very accurate figures are necessary, it will not be prudent to refer to any of those given by Herbst and other authors.



Sp. 1. *Matuta lunaris*.

TAB. 127. Fig. 3—5.

M. testa disco 6-tuberculato : tuberculis 2, 3, 1, dispositis ; duobus mediis majoribus, manibus supra et externe tuberculatis, pollice linea elevata polita transversim tenuissime striata, tibiis tertiis et quartis articulo primo superne bicarinatis.

Matuta lunaris. Lam. Cat. du Mus. d'Hist. Nat. Mss.

Fig. 4. Maris abdomen : 5. Pedipalpus externus.

Habitat ad littora insulæ Isle of France vulgatissime.

The elevated granulated margin that is found on the hinder part of the shell in all the species, in this one reaches to the base of the lateral spine, and has on it a tubercle. The lateral spines in all the specimens that I have examined turned forward.

Sp. 2. *Matuta Peronii*.

TAB. 127. Fig. 1—2.

M. testa disco 6-tuberculato : tuberculis 2, 3, 1 ; duobus anticis obsoletis, manibus supra tuberculatis extus spinosis ; pollice simplici, tibiis tertiis articulo primo bicarinatis, quartis acute unicarinatis.

Fig. 1. Fœmina : 2. Ejusdem abdomen.

Habitat in mari Indico.

The lateral spines are generally bent a little backwards, but are sometimes perfectly straight. The posterior granulated margin terminates in a tubercle, and does not reach to the base of the lateral spine. The exterior side of the hands has three spines, the middle of which is the longest.

Sp. 3. *Matuta Lesueurii*.

M. testa disco 4-tuberculato : tuberculis 3, 1 ; postico majore, manibus externe spinosis, superne tuberculatis ; pollice linea elevata polita transversim fortissime exarata, tibiis tertiis articulo primo superne bicarinatis, quartis acute unicarinatis.

Habitat in Australasiæ mari.

Mus. Hist. Nat. Gallic., Latreille, Nost.

The external side of the hands has two spines, the anterior of which is the largest. The granulated hinder margin does not reach to the spine, but terminates in an elevation. The lateral spines are straight, or slightly inclined forwards.

Sp. 4. *Matuta Banksii*.

M. testa disco tuberculis sex æqualibus fortioribus 2, 3, 1 ; manibus supra tuberculatis, extus spinosis ; pollice linea polita elevata apice transversim tenue exarata, tibiis tertiis quartisque superne bicarinatis : his carina postica obsoletissima.

Habitat

Mus. Hist. Nat. Gall., et Nost.

A short distance behind the lateral spine is a very strong tubercle, in which the granulated margin terminates. Three spines are found in the outer part of the hand ; of these, the middle is the largest. The lateral spine is generally horizontal.

I have said nothing of the colour, when speaking of the species, since each is subject to such variety that it ceases to be a character. *Matuta lunaris*, of which I have seen about eighteen specimens, is the only one that is constant in this character.

VIII. *Characters of Micippa, a new Genus of Brachyurous Malacostraca, with Descriptions of two Species.*

MICIPPA.

Testa granulosa (lateribus saltem spinosis) elongato-subquadrata antice rostro elongato-subquadrato abrupte deflecto terminata.

Orbita postice fissura profunda.

Oculi elongato-ovati pedunculo subcurvato subelongato haud crassiores.

Antennæ interiores in foveolis longitudinalibus receptæ; foveolis interne confluentibus.

exteriores mediocres; articulis duobus basilari-
bus majoribus; primo longiore; tertio ex articulis elongatis confecto.

Pedipalpi externi articulo primo interne serrato; secundo ad latus internum emarginato palpigero: palpi articulo tertio elongato aciculiformi; articulo primo crassiore inverse subconici.

Pedes mediocres: paria octo postica ordine 2, 3, 4 et 5: ungues arcuati acuti apice nudi: digitis interne tenuissime serrulatis; par anticum MARIS breve, aliis haud crassius; digitis interne tenuissime serrulatis: FEMINÆ aliis tenuius; digitis interne tenuissime serrulatis.

Abdomen 7-articulatum: MARIS obtuse carinatum; articulo primo angusto; articulis 2 et 3 abrupte latioribus: articulis sequentibus abrupte angustioribus; ultimo apice rotundato.

The singular form of the rostrum (at the base of which on each side the external antennæ are inserted) will distinguish this from any other genus of the family *Maiidea* to which it belongs. The two following species only have hitherto been observed.

Sp. 1. *Micippa cristata*.

TAB. 128.

M. testa orbita lateribusque spinosis, dorso medio spinis 2, 3, 1, 4 et 6, rostro acutissime emarginato utrinque spinoso.

Cancer cristatus. *Linn. Syst. Nat.* 1046?

Maïa cristata. *Lam. Catal. du Mus. d'Hist. Nat. Mss.*

Fig. 2. Abdomen maris. 3. Pedipalpus. 4. Rostrum a fronte visum.

Habitat

Mus. Hist. Nat. Gall.

Fig. 1. M. cristata mas mag. nat. 2. Ejusdem abdomen. 3. Rostrum et antennæ a fronte visæ.

Linné refers to a figure in Rumphius (*tab. 8. f. 1.*) for his *Cancer cristatus*; but I am by no means certain that it is the same with Lamarck's *Maïa cristata*.

Sp. 2. *Micippa Philyra*.

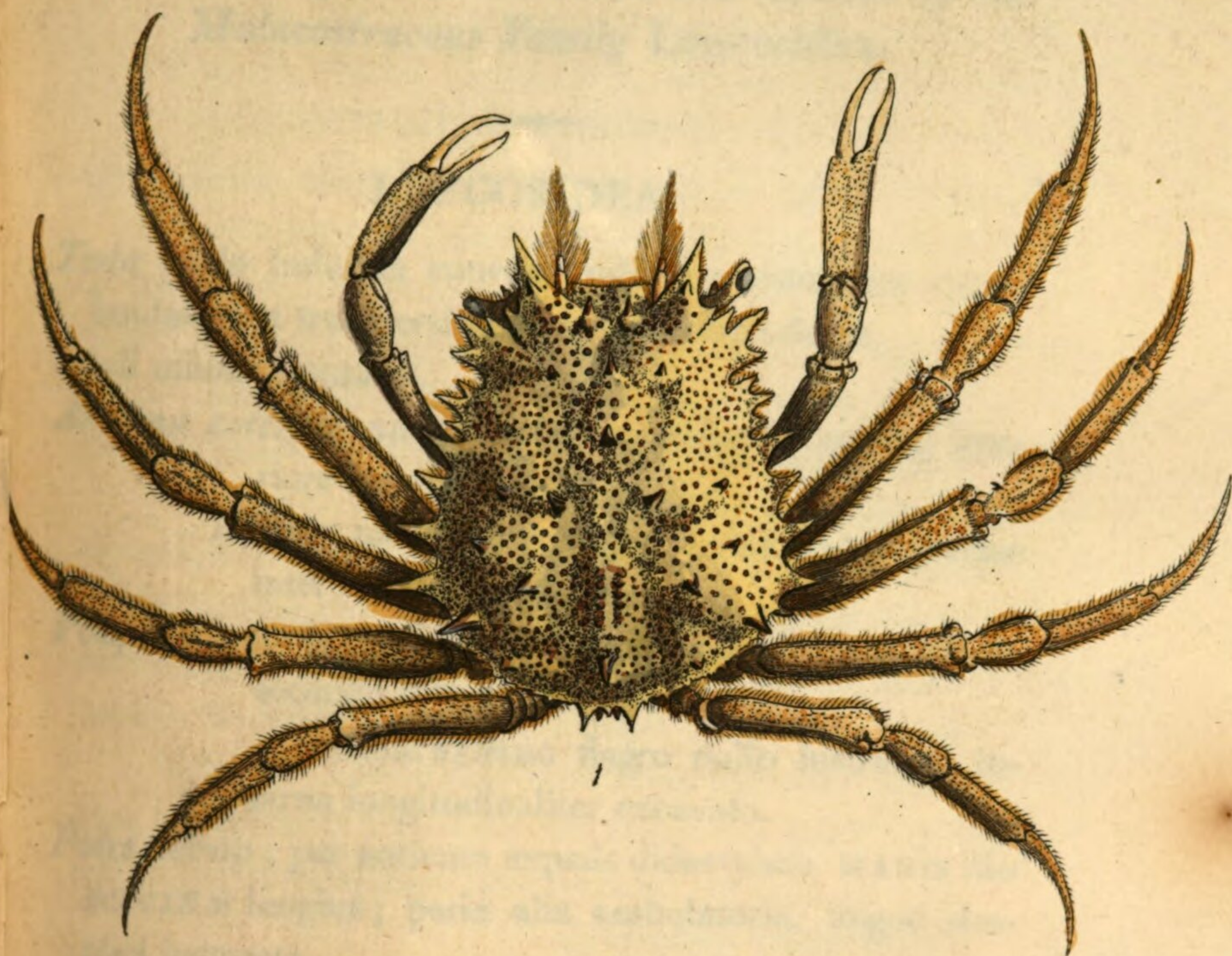
M. testa lateribus irregulariter spinosis, rostro acute emarginato utrinque spina recurva armato, manibus glabris.

Cancer Philyra. *Herbst tab. 58. fig. 4.*

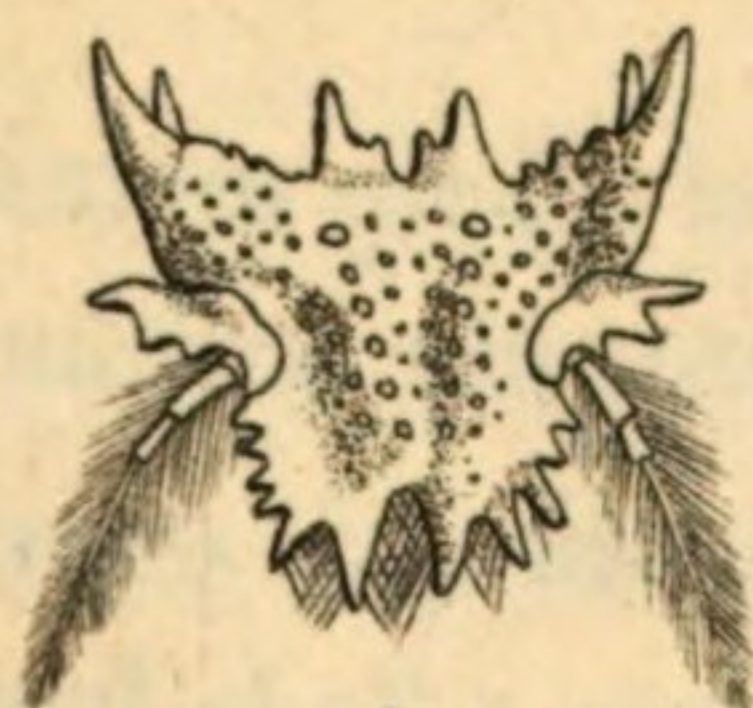
Maïa Philyra. *Lam. Cat. du Mus. d'Hist. Nat. Mss.*

Habitat in Indiæ mari.

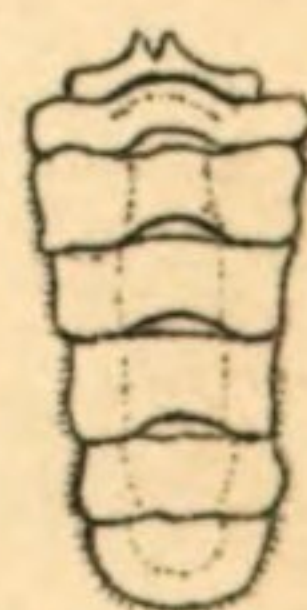
Mus. Hist. Nat. Gall. Donavit Dom. Matthieu, qui in Isle de France legit.



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IX. *Monograph on the Genera and Species of the
Malacostracous Family Leucosidea.*

LEUCOSIDEA.

Testa valde indurata convexa subovata rotundata rhomboidalis aut transversissima antice subproducta.

Oculi minuti frontales.

Antennæ externæ minutissimæ in oculorum cantho interiore insertæ :

internæ mediocres in foveolas obliquo-transversas inter oculos recipiendæ.

Pedipalpi externi caule interno sensim acuminato ; articulo secundo interne palpigero :

caule externo flagro nullo instructo, interne longitudinaliter excavato.

Pedes decem : par anticum æquale didactylum, MARIS illo FEMINÆ longius ; paria alia ambulatoria, ungue simplici instructa.

Abdomen in utroque sexu 7-articulatum ; articulis mediis confluentibus :

MARIS angustum a segmento tertio sensim acuminatum :

FEMINÆ amplissimum medio latius ; articulo ultimo parvo penultimo abrupte angustiore.

This family of *Malacostraca* has for its distinguishing characters, a convex very hard shell ; eyes small and frontal ; external antennæ very minute, placed at the internal corner of the eyes ; anterior pair of legs didactyle, the rest

formed for walking; abdomen seven-jointed, with the intermediate joints coalescing, and often obsolete; of the male narrow; of the female very large, with the last joint very small.

SYNOPSIS STIRPIUM ET GENERUM.

Stirps 1. Testa rhomboidalis. Pedum par anticum depressum, aliis multo majus; digiti deflexi.

Gen. 1. EBALIA. Testa antice producta; lateribus integris. Brachia antica subangulata; digitis subdeflexis. Pedes octo postici simplices. Pedipalpi externi caule externo lineari. Abdomen MARIS articulo ultimo basi processu dentiiformi instructum.

Gen. 2. NURSIA. Testa antice producta; lateribus postice dentato-emarginatis. Pedes angulati; digitis valde deflexis. Pedipalpi externi caule externo dilatato. Abdomen MARIS articulo penultimo apicem prope processu dentiiformi instructum.

Stirps 2. Testa rotundata aut globosa. Pedum par anticum aliis multo crassius: paria alia articulo penultimo unguibusque compressis.

Gen. 3. LEUCOSIA. Testa globosa fronte producta clypeo longiore; lateribus utrinque supra pedes anticos profunde canaliculatis. Pedipalpi externi caule interiore sensim acuminato; exteriori latiore lineari.

Gen. 4. PHILYRA. Testa rotundata depressa; fronte clypeo brevior. Pedipalpi externi caule interiore acuminato; exteriori latissimo ovato.

Gen. 5. PERSEPHONA. Testa rotundata depressa; fronte subproducta clypeo non longiore. Pedipalpi externi caulibus sensim acuminatis; exteriori apice obtusissimo.

Stirps 3. Testa ovata aut globosa; fronte subproducta.

Pedum par anticum filiforme aliis haud valde crassius; manibus apice acuminatis; digitis subfiliformibus: paria alia filiformia simplicia.

Gen. 6. MYRA. Testa ovata. Pedipalpi externi caule externo externe arcuato-producto.

Gen. 7. ILIA. Testa sub-globosa. Pedipalpi externi caule externo apice gradatim angustiore, apice rotundato.

Gen. 8. ARCANIA. Testa globosa spinosissima. Pedipalpi externi caule externo lineari apice interiore emarginato-truncato; interiore gradatim acuminato.

Gen. 9. IPHIS. Testa rotundato-rhomboidalis utrinque spina elongata instructa. Pedipalpi externi caule exteriori sublineari apicem versus sensim angustiore. *vide p. 1. add.*

Stirps 4. Testa transversa lateribus in cylindrum producta. Pedes filiformes; par anticum aliis vix crassius; digitis filiformibus.

Gen. 10. IXA. Pedipalpi externi caule exteriori breviori latiore lineari, apice rotundato; interiore articulo secundo antice excavato,

DESCRIPTIONES ET SYNONYMA SPECIERUM.

Gen. I. EBALIA.

Sp. 1. *Ebalia Pennantii*.

E. testa granulata cruce irregulari elevata, abdomine articulis 3—6 coalitis.

Cancer tuberosus. *Penn. Brit. Zool.* 4. 8. t. 9. A. f. 19.

Ebalia Pennantii. *Leach Malac. Podoph. Britt. tab.*

xxv. f. 1—6. ♂ & ♀.

Habitat in Angliæ Occidentalis æstuariis.

Sp. 2. *Ebalia Cranchii*.

E. testa granulata carinata tuberculis quinque; ordine 2 approximatis, 2 distantibus, 1 medio majore: abdomine *maris* articulis 3—5, *fæminæ* 4—6 coalitis.

Ebalia Cranchii. *Leach Malac. Podoph. Britt. t. 25. f. 7—11.* ♂ & ♀.

Habitat in Angliæ Occidentalis mari profundo.

Sp. 3. *Ebalia Bryerii*.

E. testa leviter granulata, antice subcarinata, tuberculis tribus ordine 2—1 (*fæminæ* tumidis); abdomine *maris* articulis 3—5 et 6—7, *fæminæ* 4—6 coalitis.

Cancer tuberosa. *Mont. Trans. Linn. Soc. 9. 86. t. 2. f. 3.* ♀ aucta.

Ebalia Bryerii. *Leach Malac. Podoph. Britt. t. xxv. f. 12—13.* ♀.

Habitat in Angliæ Occidentalis mari profundo.

Gen. II. NURSIA.

Sp. 1. *Nursia Hardwickii*.

N. testa utrinque 4-dentata, medio tuberculis tribus triangulum delinientibus, postice linea elevata transversa tuberculum gerente, lateribus utrinque 4-dentatis, fronte producto 4-fido.

Long. test. $6\frac{1}{2}$, lat. 8 lin.

Mus. Brit. et Soc. Linneanæ.

Habitat in Oceano Indico. Dom. Hardwicke.

Abdomen *maris* articulis 3—6 confluentibus.

Gen. III. LEUCOSIA.

Sp. 1. *Leucosia craniolaris*.

L. fronte dentibus tribus : medio longiore.

Cancer craniolaris. *Herbst* 1. 90. *tab.* 2. *f.* 17.

Leucosia craniolaris. *Fabr. Suppl. Ent. Syst.* 350.

Latr. Hist. Nat. des Crust. et des
Insect. 6. 117.

Latr. Gen. Crust. et Insect. 1. 36.

Licht. Berl. Magaz. 1815. *p.* 141.

Habitat in Indiæ mari.

Mus. Linn. Soc., Nostr. ♂.

In *Herbst's* figure the frontal teeth are represented equal, whereas in all the specimens that I have examined the middle one is longest.

Sp. 2. *Leucosia Urania*.

L. fronte prominente integro.

Cancer Urania. *Herbst* 3. 2. 17. *t.* 53. *f.* 3.

Leucosia Urania. *Licht. Berl. Mag.* 1815. *p.* 140.

Habitat in Oceano Indico.

Mus. Britan., Soc. Linn. ♀. Donavit Hardwicke.

The last joint of the four hinder pair of legs, in the female, which is the only sex that I have seen, is very much dilated, and compressed both above and below. In *L. craniolaris* this joint is merely compressed, and is nearly filiform. The claws of both species are compressed.

Gen. IV. PHILYRA.

Sp. 1. *Philyra scabriuscula*.

Ph. testa depressiuscula glaberrima polita, postice et lateraliter scabra, brachiis granulatis; granulis in lineas digestis.

Cancer Cancellus. *Herbst* 1. 94. t. 2. f. 20.

Leucosia scabriuscula. *Fabr. Suppl. Ent. Syst.* 349.

Licht. Berl. Mag. 1815. p. 142.

Habitat in mari Indico,

Mus. Soc. Linn., Nostr. ♂ et ♀.

Sp. 2. *Philyra globosa*.

Ph. testa convexiuscula lævi, margine granulata, brachiis *maris* basi, *fæminæ* totis scabris.

Leucosia globosa. *Fabr. Suppl. Ent. Syst.* 349.

Licht. Berl. Mag. 1815. p. 141.

Cancer Porcellanus. *Herbst* 1. 92. t. 2. f. 18. ♂.

Habitat in mari Indico.

Mus. Linn. Soc., Nostr. ♂ ♀.

Testa MARIS margine regulariter, FÆMINÆ irregulariter, granulato.

Gen. V. PERSEPHONA*.

Testa antice utrinque dilatata; postice spinis tribus; media altiore. Abdomen maris articulis 3—5 confluentibus.

Sp. 1. *Persephona Latreillii*.

P. testa angulis anticis gradatim et obtuse dilatatis, gra-

* Ad hoc genus forte pertinet *Leucosia Mediterranea*. *Licht., Herbst* 2. 150. t. 37. f. 2.

nulis sparsa; postice spinis tribus æqualibus recurvis;
brachiis tuberculatis.

Long. testæ unc. $2\frac{1}{2}$.

Habitat

Mus. Brit.

Sp. 2. *Persephona Lamarckii*.

P. testa angulis anticis subangulatim dilatatis, granulis sparsa; postice spinis tribus æqualibus recurvis; brachiis granulatis.

Long. testæ $2\frac{1}{2}$ unc.

Habitat

Hanc speciem, cum collectione tota sua Crustaceorum, summa liberalitate mihi communicavit clarissimus zoologiæ Professor Lamarck.

Sp. 3. *Persephona Lichtensteinii*.

P. testa subcomplanata granulis sparsa, angulis anticis lateribus utrinque in tuberculum abrupte productis; postice spinis tribus vix recurvis, media longiore; brachiis tuberculis detritis scabrosis.

Long. testæ $1\frac{1}{4}$ unc.

Habitat

Mus. Brit. ♀.

Gen. VI. MYRA.

Pedes antici in utroque sexu valde elongati, filiformes: digiti interne spinulosi. Abdomen *maris* articulis 3—6 confluentibus; penultimo apice unidentato: *fæminæ* articulis 4—6 confluentibus.

Sp. 1. *Myra fugax*.

M. testa subgranulata ; postice spinis tribus, intermedia longiore altiore.

Leucosia fugax. *Fabr. Suppl. Ent. Syst.* 351.

Latr. Hist. Nat. des Crust. et des Insect.

6. 121.

Licht. Berl. Mag. 1815. p. 142.

Cancer punctatus. *Herbst* 1. 89. t. 2. f. 15—16.

Habitat in mari Indico.

Mus. Soc. Linn. ♂ et ♀.

Gen. VII. ILIA.

Sp. 1. *Ilia Nucleus*.

Il. testa granulata antice lævi, postice bidilatata spina utrinque, fronte emarginata, lateribus antice utrinque dilatatis, brachiis scabrosis.

Cancer Nucleus. *Linn. Syst. Nat.* 12. 1. 1040.

Herbst i. 87. t. 2. f. 14. ♂.

Leucosia Nucleus. *Fabr. Suppl. Ent. Syst.* 351.

Latr. Gen. Crust. et Insect. 36.

Licht. Berl. Mag. 1815. p. 142.

Habitat in Mediterraneo.

Mus. Nostr. ♂ et ♀.

Gen. VIII. ARCANIA.

Sp. 1. *Arcania Erinaceus*.

A. testa spinis tribus posticis et lateralibus longioribus spinosis, fronte acute emarginata ; laciniis acutis.

- Leucosia Erinaceus. *Fabr. Suppl. Ent. Syst.* 352.
Latr. Hist. Nat. des Crust. et des
Insect. 6. 119.
Licht. Berl. Mag. 1815. p. 143.
- Cancer Erinaceus. *Herbst* 1. 158. t. 20. f. 3.
- Habitat in oceano Indico.
Mus. Brit., Soc. Linn.

Gen. IX. IPHIS.

Testa fronte subproducta. Pedes antichi filiformes : manus apice attenuatæ ; digiti elongati, intus subspinulosi, subdeflexi.

Sp. 1. *Iphis septemspinosa.*

Iph. testa subgranulata, postice subcarinata 5-spinosa ; spina media longiore, spinis lateralibus brachiisque basi granulatis.

- Leucosia septemspinosa. *Fabr. Suppl. Ent. Syst.* 351.
Latr. Hist. Nat. des Crust. et
des Insect. 6. 119.
Licht. Berl. Mag. 1815. p. 143.

Cancer 7-spinosus. *Herbst* 1. 256. t. 20. f. 112.

Habitat in mari Indico.

Mus. Soc. Linn.

Abdomen MARIS articulis 3—5, FEMINÆ 4—5 confluentibus.

Gen. X. IXA.

Pedum par anticum digitis denticulatis.

Sp. 1. *Ixa canaliculata*.

TAB. 129. Fig. 1.

Ixa testa irregulariter bicanaliculata; lateribus spina instructis.

Leucosia Cylindrus. *Fabr. Suppl. Ent. Syst.* 352.

Latr. Hist. Nat. des Crust. et des Insect. 6. 119.

Licht. Berl. Mag. 1815. p. 143.

Ixa Cylindrus. *Leach Trans. Linn. Soc.* 11. 334.

Habitat in mari Indico.

Mus. Soc. Linn.

Sp. 2. *Ixa inermis*.

TAB. 129. Fig. 2.

Ixa testa postice bituberculata; lateribus inermibus.

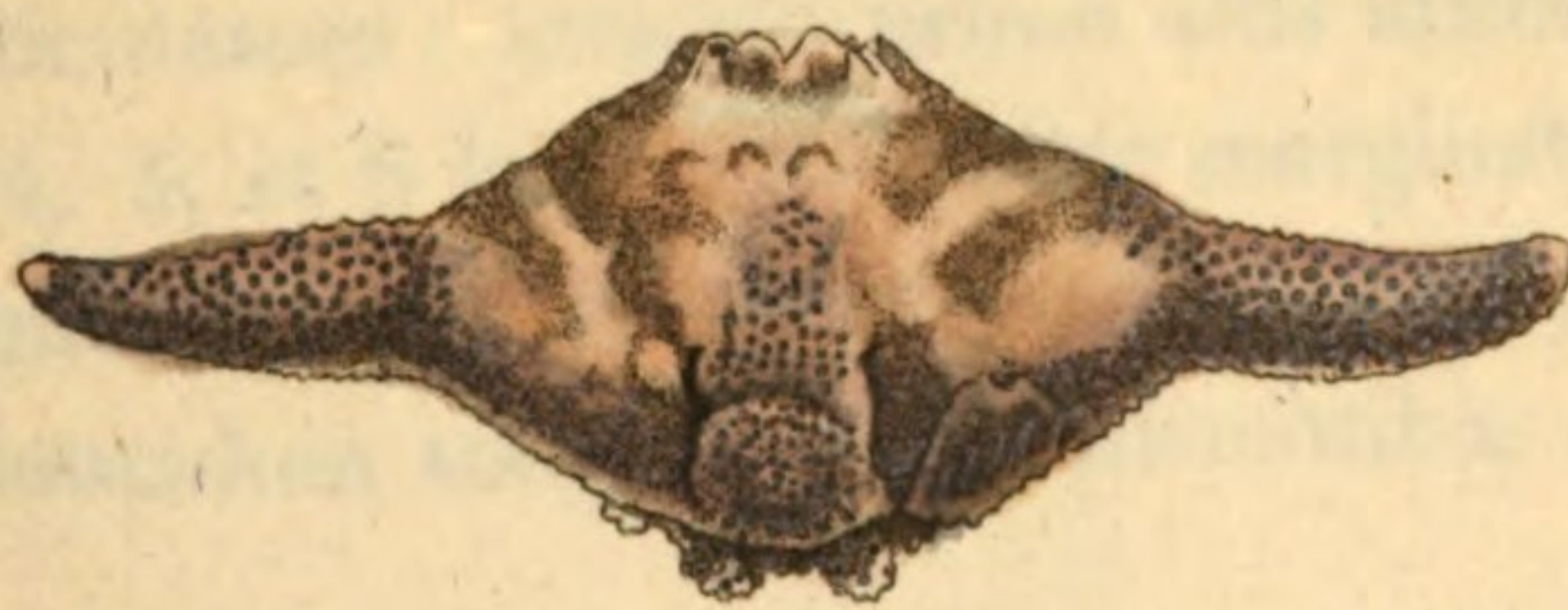
Habitat

Mus. Nost. Communicavit Dom. Dufresne.

Latera et tubercula testæ fortiter granulata.



1



2

Gen. N. 11a

Forma var. colorata. Anglii dardaniensis

Fig. 1. Form. colorata

Tab. 11a. Fig. 1.

Forma hirsuta. Anglii dardaniensis; lateralis. Anglii dardaniensis

Lateralis Cylindrica. Fabr. Syst. Ent. Syst. 374

Anglii dardaniensis. Anglii dardaniensis

Anglii dardaniensis. Anglii dardaniensis

Anglii dardaniensis. Anglii dardaniensis

Anglii dardaniensis

Anglii dardaniensis

Fig. 2. Form. colorata

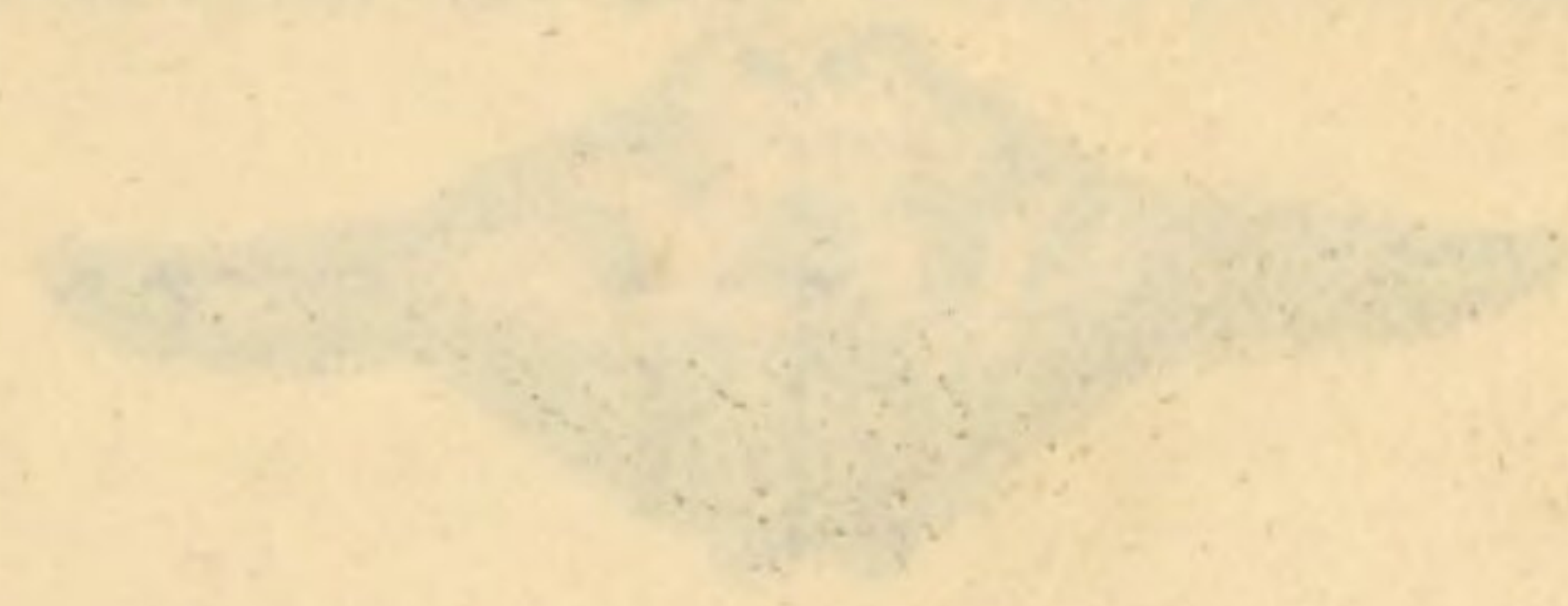
Tab. 11a. Fig. 2.

Forma hirsuta. Anglii dardaniensis; lateralis. Anglii dardaniensis

Habitus

Mod. Anglii dardaniensis

Anglii dardaniensis



11

X. *On the Characters of the Genus Thalassina of Latreille, with a Description of one Species.*

—
THALASSINA.

THALASSINA. *Latreille, Leach.*

Antennæ in eadem fere linea horizontali insertæ :

interiores articulis duobus subæqualibus : pedunculus magnus antenna longior : setæ duæ inæquales ; interiore brevior, tenuior.

exteriores articulis tribus primis elongatis ; secundo longiore : seta multi-articulata elongata.

Pedipalpi externi caule interno 5-articulato piloso ; articulo primo longiore spinuloso ; articulis aliis inermibus.

Pedum paria duo antica didactyla : digitis interne denticulatis ; pollicibus abbreviatis : (pari antico maximo inæquali ; pari secundo submonodactylo valde compresso, supra ac infra piloso :) paria 3 et 4 compressa ; ungues subtus spinosi ; par 5 simplex ; unguis inermis.

Testa compressa antice rostrata, postice producta.

Abdomen 7-articulatum : articulo primo aliis altiore ; articulis 2, 3, 4, 5, et 6 lateribus inferne marginatis : articulo 7 elongato magno, lamellis duabus angustis linearibus in pedunculum subgibbosum insistentibus utrinque instructo.

This genus inhabits the Indian seas ; and although the characters are so very peculiar, yet it has been confounded with GEBIA, a genus found in the Red and Mediterranean seas and European ocean.

I have seen but one species of *Thalassina*, but possess a drawing of another, which was given to me by Col. Hardwicke, who informed me that it was designed by a native of India, from a specimen which he gave to him for that purpose.

Thalassina Scorpionoides.

TAB. 130.

Th. rostro marginato: margine antice granulato, femoribus superne simplici infra duplici serie spinosis, manibus granulatis supra bicarinatis: carina interiore spinosa; exteriori granulosa.

Astacus Scorpionoides. *Lam. Catal. du Mus. d'Hist. Nat. Mss.*

Thalassina Scorpionoides. *Latr. Gen. Crust. et Insect. Leach Edinb. Encycl. 6.*

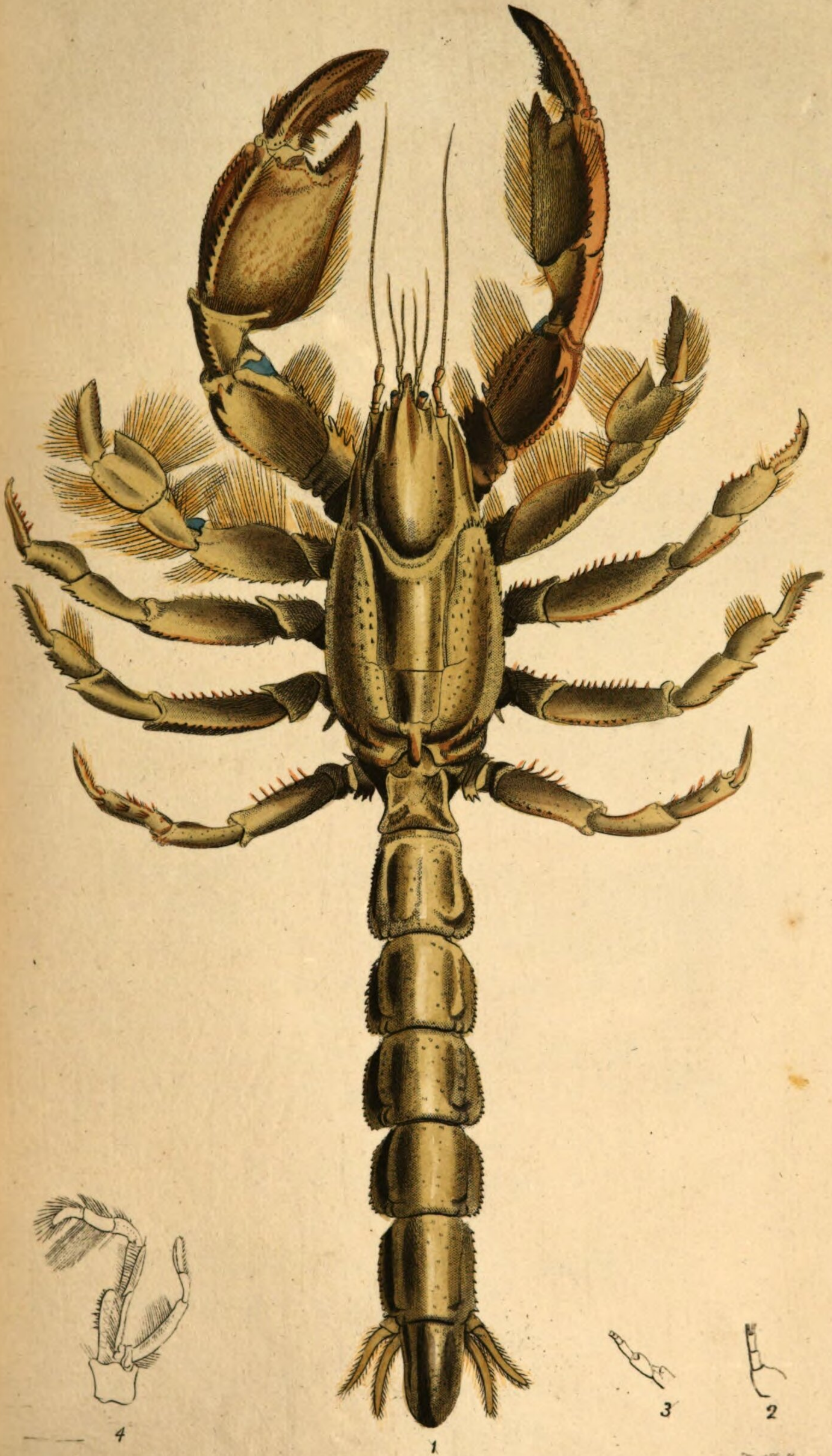
Cancer ASTACUS anomalus. *Herbst Drit. Band. 45. t. 62. Fig. 2. Antennæ interioris basis. 3. Antennæ exterioris basis. 4. Pedipalpus.*

Habitat in Indiæ mari.

Mus. Hist. Nat. Gall. et Collegii Reg. Chirurg. Lond.

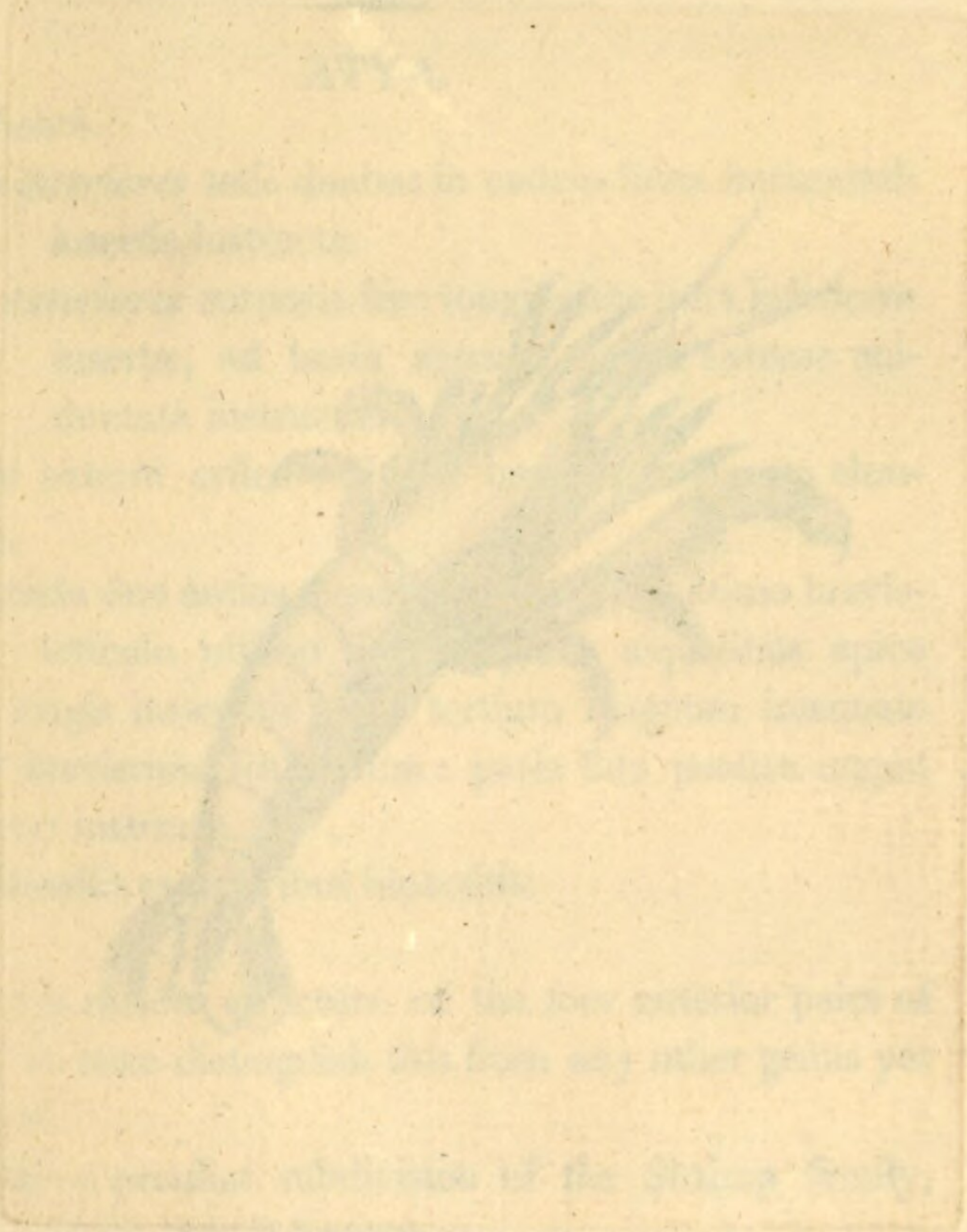
I have figured this species to enable those naturalists who have not seen the genus *Thalassina* to compare it with *Gebia**, with which it has lately been arranged by Latreille in Cuvier's *Regne Animale*.

* See Leach *Malac. Podoph. Britt. Tab. xxxi.*



The Character of the Genus *Atya* of Linn.
and a Description of the Species.

ATYA.



Atya Linn.

Tab. 131.

Length of the body, from the tip of the rostrum to the end of the abdomen, 1.5 lines. The body is brownish, the legs are reddish.



Engraved & Published by R. P. Voss

XI. *On the Characters of the Genus Atya of Leach,
with a Description of one Species.*

—
ATYA.

ATYA, *Leach.*

Antennæ interiores setis duabus in eadem linea horizontali insertis instructæ.

exteriores corporis fere longitudine infra inferiores insertæ, ad basin squama magna externe unidentata instructæ.

Pedipalpi externi articulo ultimo brevioribus; flagrum elongatum.

Pedum paria duo antica æqualia articulo penultimo brevissimo: articulo ultimo fisso; laciniis æqualibus apice ciliis longis instructis: par tertium magnum inæquale ungue brevissimo instructum: paria duo postica ungue mediocri instructa.

Cauda lamellis exterioribus bipartitis.

The very curious structure of the four anterior pairs of legs will at once distinguish this from any other genus yet discovered.

It forms a peculiar subdivision of the Shrimp family, and one species only is known.

Sp. 1. *Atya scabra.*

TAB. 131.

A. rostro carinato trifido: dente medio longiore, pedibus sex posticis scabris.

Atya scabra. Leach Trans. Linn. Soc. 11. 345.

— *Encycl. Brit. Suppl.* 1. 421. *tab.* 21.

Habitat

Mus. Britan.

The locality of this species is unknown.

XII. *The Characters of the Genera of the Class Myriapoda, with Descriptions of some Species.*

MYRIAPODA.

CHARACTER EXTERNUS.

Caput antennis 2: mandibulis 2: maxillis 4 confluentibus in labium inferius transformatis.

Corpus multi-articulatum; segmentis omnibus pedigeris.

OBS. Pedum paria 2 antica sæpe in labia 2 auxiliaria transformatata.

It is to the researches of Savigny that naturalists are indebted for a knowledge of the change of form in those parts which always exist under various modifications, in the mouths of such annulose animals as have jointed legs.

The three anterior segments of the body of the *Myriapoda* seem to correspond with the thorax of insects. This idea was suggested to me by Blainville, Latreille, and Savigny, and has received a strong degree of probability from the observations that I have since had an opportunity to make.

In *Crustacea*, *Myriapoda*, *Arachnides*, and *Insecta*, the nervous system is very similar: as far as I have observed, the first ganglion always receives nerves from the parts proper to the head; the three following ones, from the three anterior pairs of legs and parts adjacent; and the rest, from the viscera of the abdomen and its appendices.

Before the publication of Savigny's Memorial on the Mouths of Insects, &c. naturalists had fallen into many

errors respecting the structure of the mouths of the *Myriapoda*.

As formerly, I consider this Class to consist of two Orders, and of the following Genera, &c.

Ordo I. CHILOGNATHA.

Antennæ 7-articulatæ. *Pedes* breves. *Corpus* sæpius crustaceum.

Gen. I. GLOMERIS.

GLOMERIS, *Latr.*

Corpus elongato-ovale convexum in globum contractile.

Oculi distincti. *Pedes* utrinque 16. *Antennæ* capitis paginae supernæ insertæ, articulo secundo tertio brevior.

Sp. 1. *Glomeris marginata*.

TAB. 132.

G. nigra segmentis margine luteo aut croceo.

Oniscus marginatus. *Vill. Ent.* 4. 187. t. 11. f. 15.

Oniscus zonatus. *Panz. Fn. Ins. Germ.* 9. 25.

Glomeris limbata. *Latr. Gen. Crust. et Insect.* 1. 74.

Julus oniscoides. *Stew. Elem. Nat. Hist.* 2.

Glomeris marginata. *Leach Trans. Linn. Soc.* 11. 377.

Fig. superior, *G. marginata* aucta; sinistra et dextra magnat.; inferior Antenna aucta.

Habitat in Europa sub lapidibus, muscis.

Gen. II. JULUS.

JULUS *auctorum*.

Corpus elongatum cylindraceum serpentiforme. *Oculi* distincti. *Pedes* plurimi.

Antennæ capitis paginae supernæ insertæ, articulo secundo tertio longiore.



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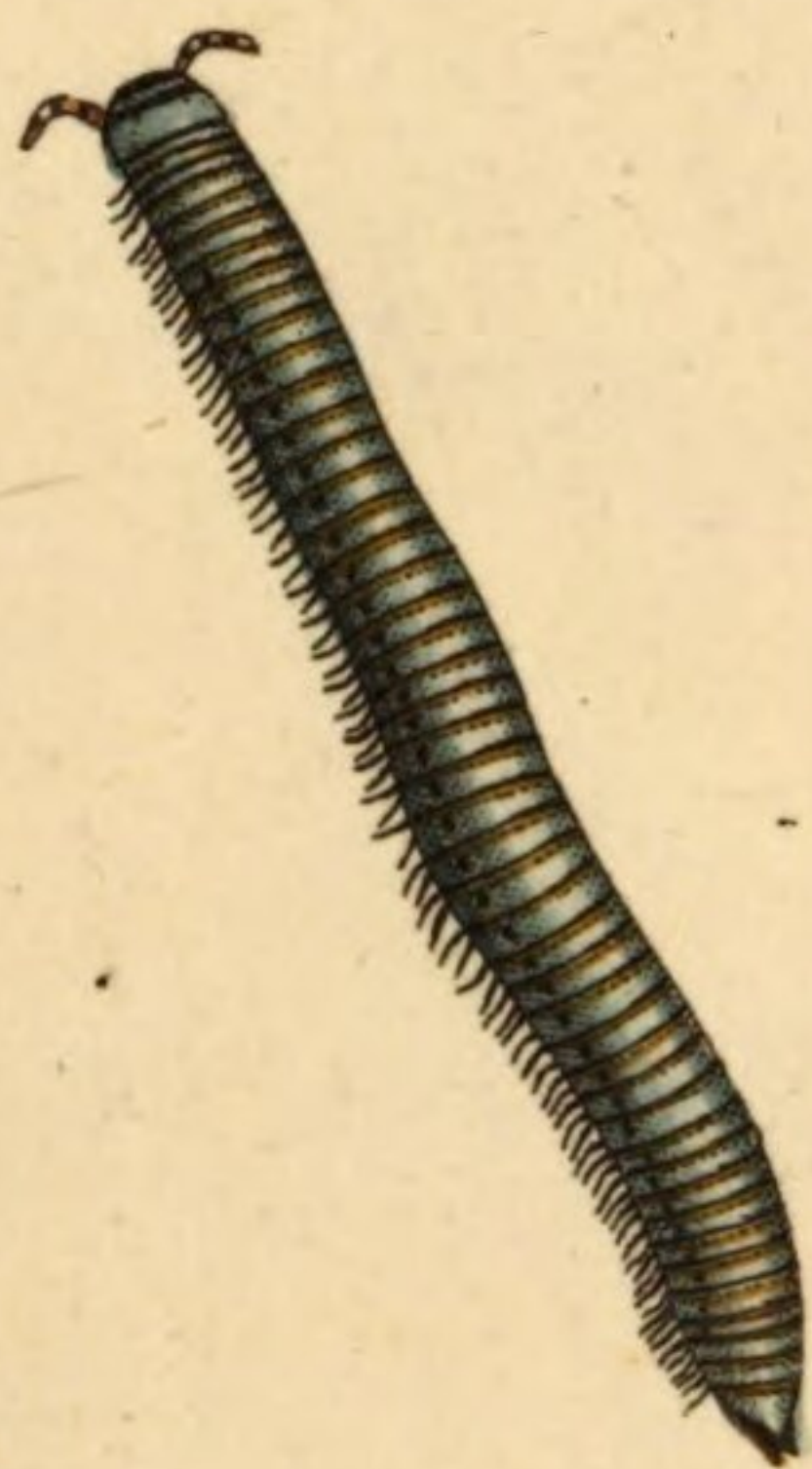
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Sp. 1. *Julus sabulosus*.

Jul. nigro-cinereus lineis duabus dorsalibus rufescentibus, segmento ultimo mucronato, pedibus luteis.

Julus sabulosus auctorum.

Jule à bandes. *De Geer Mem.* 7. 928. t. 36. f. 9—11.

Long corp. $1\frac{1}{2}$ unc.

Habitat in Europæ sabulosis inter muscos et sub lapidibus.

Corpus longitudinaliter lineolatum, lineis vix subundulatis. Facies flava nigro-punctulata.

This common species may readily be distinguished from all the other indigenous species, by the thickness of its body, by the form of the point of the last segment of the body, and by its colour, which after death changes to a light blueish violet, with testaceous instead of red lines.

Sp. 2. *Julus Londinensis*.

TAB. 133.

Jul. brunneo-nigricans segmento ultimo submucronato: mucrone ano brevior, pedibus rufescentibus articulis pallidis.

Julus Londinensis. Leach Trans. Linn. Soc. 11. 378.

— *Encycl. Brit. Supp.* 1. t. 22.

Long. corp. $2\frac{1}{4}$ unc.

Habitat in sylvis prope Londinum inter muscos vulgarissime.

Fig. 1. *J. Londinensis* mag. nat. 2. Pes auctus. 3. Antenna amplificata.

Corpus lineolis longitudinalibus tenuissimis rectis exaratum.

After death the body is very often banded with brassy rings.

Sp. 3. *Julus niger*.

J. segmento ultimo mucronato, pedibus pallide rufescentibus.

Julus niger. *Leach Trans. Linn. Soc.* 11. 378.

Long. corp. $1\frac{1}{2}$ lin.

Habitat sub lapidibus. In Calidonia vulgaris.

Corpus fortius lineolatum; lineolis inæqualibus.

Colour of the body after death blueish.

Sp. 4. *Julus terrestris*.

J. cinereo-fuscus annulis dilute brunneis, capite anoque dilutioribus, ventre pedibusque sublutescente-albis, segmento ultimo mucronato.

Julus terrestris auctorum.

Long. corp. 1 unc.

Habitat in Europæ sabulosis, sylvis.

Dorsum striis longitudinalibus rectis exaratum. Pedes articulis subfuscis.

The striæ are much stronger in this than in the preceding species, and the colour is constantly different.

Sp. 5. *Julus punctatus*.

J. segmento ultimo mucronato, corpore sub-pellucido pallide subcarneo, segmentorum lateribus postice puncto nigro notatis.

Julus punctatus. *Leach Trans. Linn. Soc.* 11. 379.

Long. corp. 10 lin.

Habitat in Britannia sub cortice arborum et inter muscos passim.

Sp. 6. *Julus pulchellus*.

J. corpore pallidissime flavesciente-albido, lateribus utrinque
linea punctorum coccineorum, segmento ultimo inermi.

Julus pulchellus. *Leach Trans. Linn. Soc.* 11. 379.

Long. corp. $7\frac{1}{2}$ lin.

Habitat in Calidoniæ, Angliæ muscis.

Dorsum glabrum striis nullis.

This species is common in the mountainous districts of Great Britain, under moss: it is sometimes found also in gardens at the roots of plants. Some of the segments near the head want the red spots.

Sp. 7. *Julus pusillus*.

J. segmento ultimo submucronato, corpore cinerascen-
t nigro aut fusco-brunneo, dorso lineis duabus rufescentibus.

Julus pusillus. *Leach Trans. Linn. Soc.* 11. 379.

β. Corpore rufescente lateribus lineaque dorsali fusco-brun-
neis.

Long. corp. 5—6 lin.

Habitat sub lapidibus et inter graminum radices: Prope
Edinburgum et Londinum haud infrequens.

Dorsum lineis fortioribus exaratis, distantibus rectis sub-
inæqualibus. Antennæ fuscae articulis dilutis. Pedes lu-
tescentes.

Gen. III. CRASPEDOSOMA.

CRASPEDOSOMA, *Leach*.

Corpus elongatum lineare depressum, segmentis lateraliter
marginatis compressis. *Oculi* distincti. *Pedes* plurimi.

Antennæ capitis paginæ supernæ insertæ, articulo secundo tertio brevior.

* *Segmentis lateribus medio prominulis.*

Sp. 1. *Craspedosoma Rawlinsii.*

TAB. 134. Fig. 1—5.

C. dorso fusco-brunneo lineis quatuor punctorum alborum, ventre pedibusque rufescentibus.

Craspedosoma Rawlinsii. *Leach Trans. Linn. Soc.* 11. 380.

— *Encycl. Brit. Supp.* 1. 430.
pl. 22.

— *Edin. Encycl.* 7. 407—434.

Long. corp. 7 lin.

Fig. 1 et 3. mag. nat. 2. aucta. 5. Pes auctus. 4. Antenna amplificata.

Habitat inter muscos et sub lapidibus prope Edinburgum vulgatissime. Detexit R. Rawlins, qui hoc genus proposuit.

** *Segmentis lateribus postice productis.*

Sp. 2. *Craspedosoma Polydesmoides.*

TAB. 134. Fig. 6—9.

C. dorso rufo-griseo, ventre pallido, pedibus rufescentibus basi pallidis, angulis segmentorum postice setigeris.

Julus Polydesmoides. *Montagu Mss.*

Craspedosoma Polydesmoides. *Leach Edin. Encycl.* 8. 407—434.

— *Trans. Linn. Soc.* 11. 380.

— *Encycl. Brit. Supp.* 1. 430. pl. 22.



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Long. corp. $6\frac{1}{2}$ lin.

Fig. 6, 9, 8. Antenna, pes, et animal, aucti. 7. mag. nat.

Habitat in Anglia sub lapidibus. In Danmoniaë subalpinis vulgatissime; prope Londinum rarius.

Corpus rufo-griseum, pedibus pallidioribus. Dorsum linea longitudinali impressum. Segmenta lateribus valde prominentibus, angulis anticis rotundatis, posticis retrorsum productis, setigeris; seta conica alba. Facies saturate rufo-grisea. Oculi atrii. Antennæ rufo-griseæ subpilosulæ. Venter pallidus albidus. Pedes rufescentes basi pallidi.

Gen. IV. POLYDESMUS.

POLYDESMUS, *Latr., Leach.*

Corpus elongatum lineare depressum; segmentis lateraliter marginatis. *Oculi* obsoleti. *Pedes* plurimi. *Antennæ* capitis paginæ supernæ insertæ, articulo secundo tertio brevior.

Sp. 1. *Polydesmus complanatus.*

TAB. 135.

Julus complanatus auctorum.

Polydesmus complanatus. Latr., Leach.

Fig. sup. P. complanatus auctus: sinistra et inferior, Pes et antenna aucti: dextra, Animal mag. nat.

Gen. V. POLLYXENUS.

POLLYXENUS, *Latreille.*

Corpus elongatum lineare depressum: segmentis utrinque fasciculato-squamosis: ultimo penicillato. *Pedes* utrinque 12. *Antennæ* sub capitis margine antico insertæ.

Sp. 1. *Pollyxenus Lagurus*.

TAB. 135. B.

P. corpore fusco, capite nigro, penicillo caudali albo.

Scolopendra Lagura. *Linn. Syst. Nat.* 1062.*Fabr. Ent. Syst.* 2. 389.Jule à queue en pinceau. *De Geer Mem.* 7. pl. 36. f. 1—3.La Scolopendre à pinceau. *Geoff. Hist. des Ins.* 2. 677.
pl. 22. fig. 4.*Pollyxenus Lagurus*. *Latr. Gen. Crust. et Ins.* 1. 77.—— *Cuv. Reg. An.* 3. 155.Long. corp. $1\frac{1}{2}$ aut $2\frac{1}{4}$ lin.

Habitat in Europa sub arborum emortuarum cortice ubique frequens.

Ordo II. SYNGNATHA.

Antennæ 14-articulatæ et ultra. *Pedes* elongati. *Corpus* depressum, coriaceum aut membranaceum.

Gen. I. CERMATIA.

CERMATIA. *Illiger, Leach.*SCUTIGERA. *Lamarck, Latreille.**Corpus* segmentis supra scutis tectis. *Pedes* 34 longissimi, tarsis multiarticulatis; pari postico longiore: femoribus secundis expansione lamelliformi basi tantum coalita, antice integra nec denticulata: tarsi 4 antici 1-articulati. *Oculi* magni.Sp. 1. *Cermatia livida*.

TAB. 136.

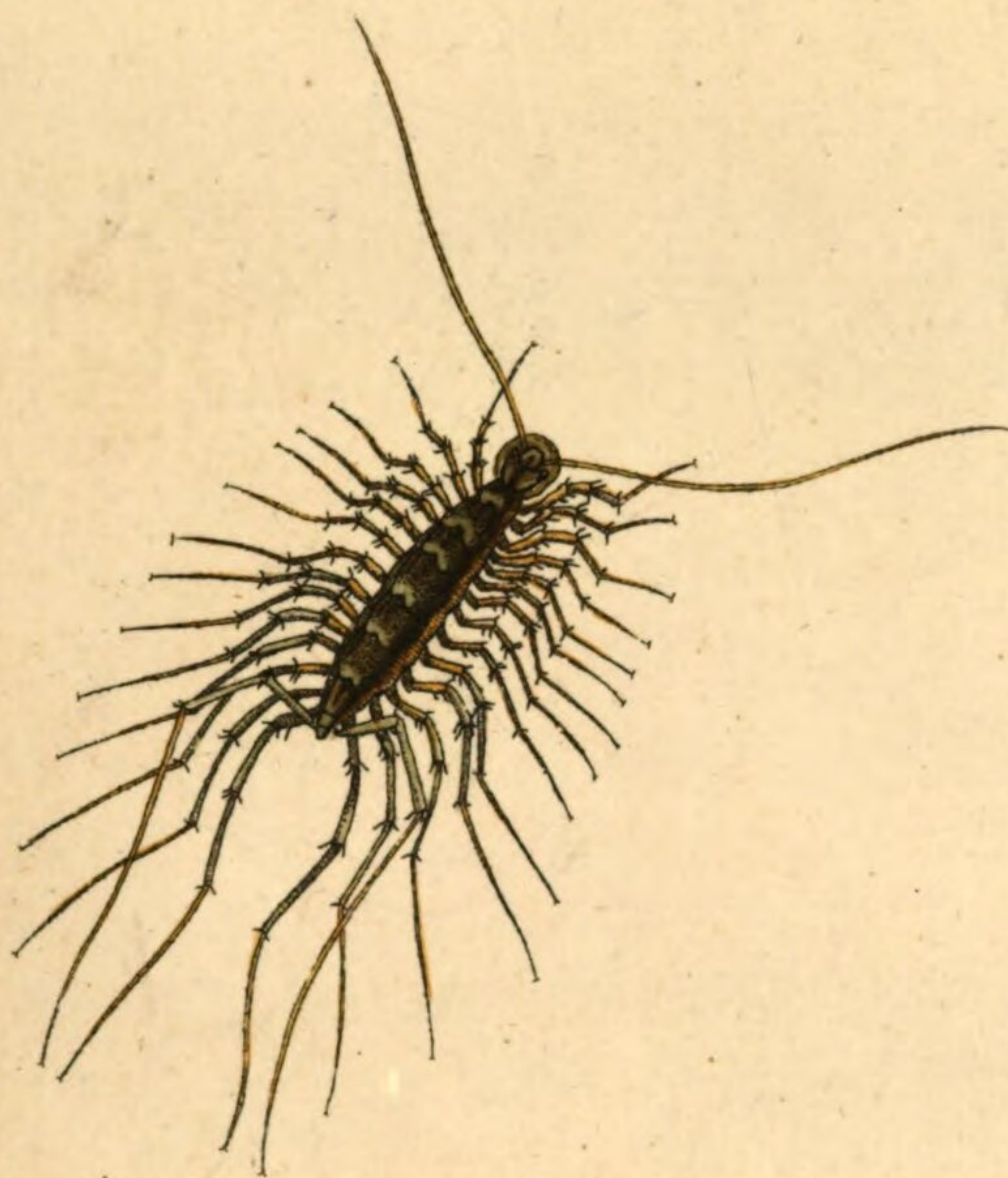
C. corpore livido, pedibus luteis.

Habitat in Madeiræ insulæ domibus. An a *Scolopendra coleoptrata* Linnæi species distincta?

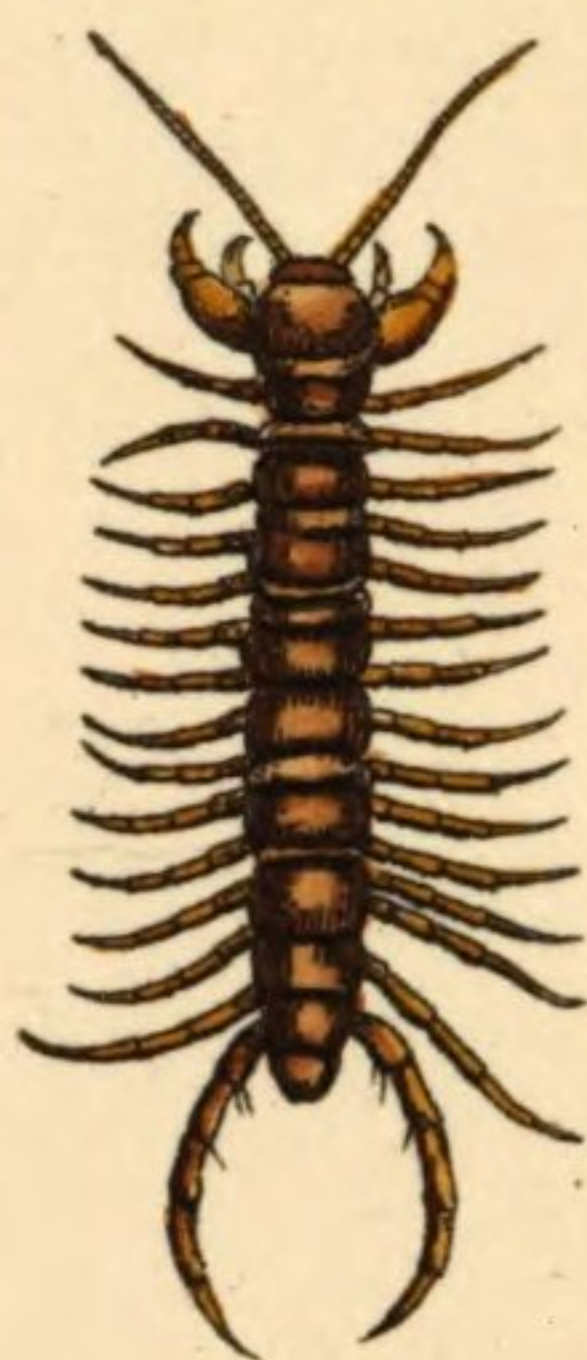
135
B.



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I received several specimens of this animal from Madeira, through the kindness of Mrs. Morshead, who informed me that they were very common in the houses. As I have never seen the *Scutigera araneoides* of Latreille, and as the specimens which I have, will neither agree with the figures nor descriptions of authors, I feel myself justified in considering them as referable to another species.

Gen. II. LITHOBIUS.

Antennæ conico-setaceæ; articulis (45 circiter) subconicis; duobus basilaribus majoribus. *Pedes* 34 posticis longioribus; femoribus secundis confluentibus, expansione lamelliformi medio late emarginata, valde denticulata. *Oculi* granulati.

Sp. 1. *Lithobius forficatus*.

TAB. 137.

L. capite lato, pedibus testaceo-flavicantibus; femoribus secundis expansione lamelliformi tota profunde impresso-punctata.

Scolopendra forficata *auctorum*.

Lithobius forficatus. *Leach Edinb. Encycl.* 7. 408.

—— *Trans. Linn. Soc.* 11. 381.

—— *Encycl. Brit. Sup.* 1. 431.

pl. 22.

Fig. superior mag. nat.; sinistra, Antenna aucta; dextra, Pes auctus.

Habitat in Europa sub lapidibus. In Anglia, Hibernia rarior.

Long. corp. 1 unc.

Antennæ sordide testaceæ, pilosulæ. *Pedum* par secundum (*mandibulæ auctorum*) *tarsis* basi sordide testa-

ceis, apice piceo-ferrugineis ; expansione lamelliformi sordide testacea, sutura longitudinali profunde impressa, denticulis basi ferrugineis, apice piceo-atris.

Sp. 2. *Lithobius variegatus*.

L. capite corpore paulo latiore, pedibus flavo-testaceo-pallidis fusco-maculatis ; femoribus secundis expansione lamelliformi punctis læviter impressis.

Lithobius variegatus. Leach *Edinb. Encycl.* 7. 409.

—— *Trans. Linn. Soc.* 11. 382.

Long. corp. 8—9 $\frac{1}{4}$ lin.

Habitat in Anglia occidentali, præsertim in Danmonia.

A præcedente differt, capite angustiore, femoribus secundis minus crebre punctatis, pedibusque variegatis nec concoloribus.

Sp. 3. *Lithobius vulgaris*.

L. capite corporis latitudine (fœminæ ? angustiore), pedibus testaceo-flavis ; femoribus secundis expansione lamelliformi glaberrimo polito antice obscurissime punctulato.

Lithobius lævilabrum. Leach *Edinb. Encycl.* 7. 409.

—— *Trans. Linn. Soc.* 11. 382.

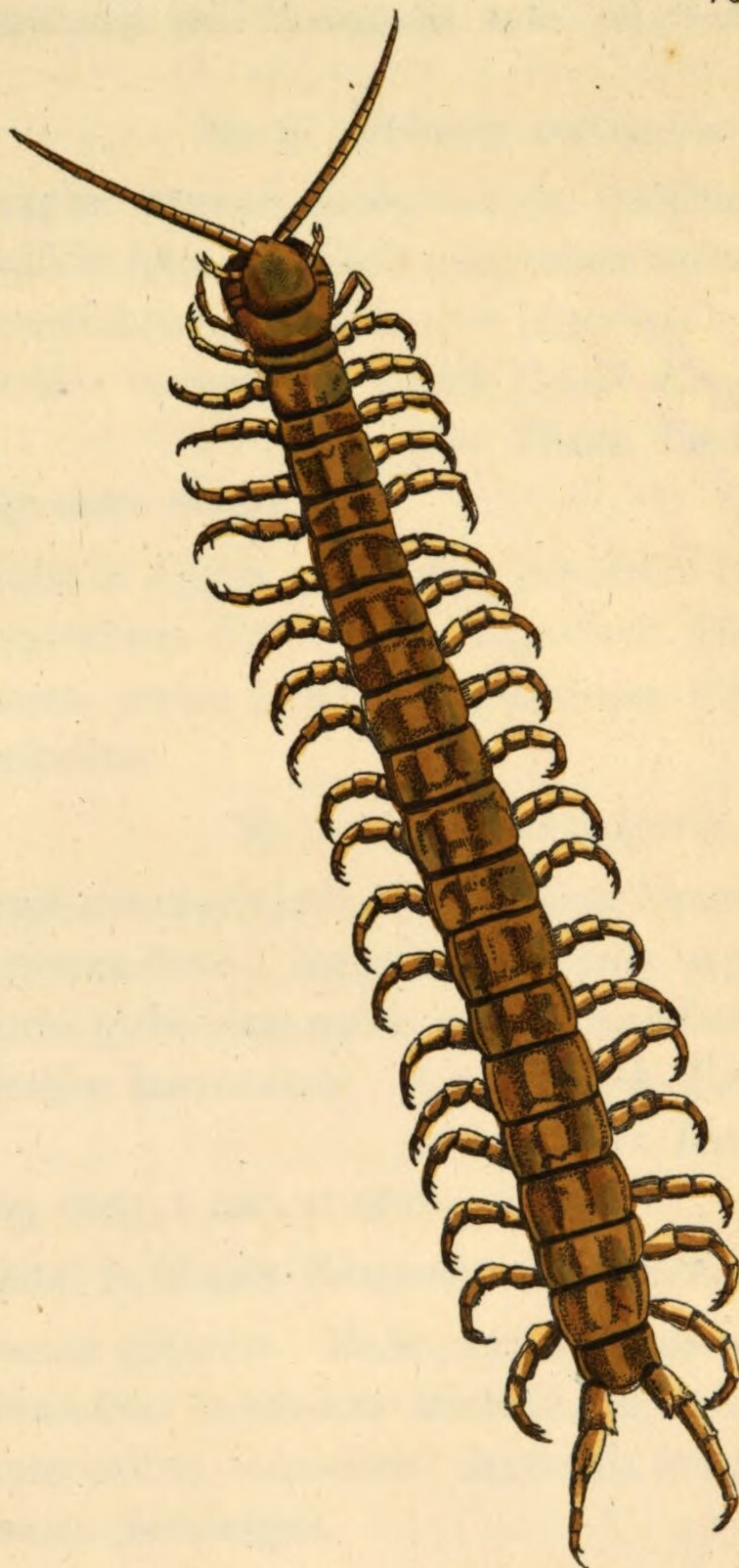
Long. corp. 1 unc. et ultra.

Habitat in Magna Britannia sub lapidibus passim.

Antennæ pilosulæ. Pedes secundi tarsis apice piceo-atris ; femoribus expansione lamelliformi laciniis marginalibus anterioribus rotundatis, denticulis ferrugineis apice extremo piceo-nigris.

Gen. III. SCOLOPENDRA.

Antennæ conico-setaceæ, 17-articulatæ ; articulis subconicis. *Pedes* 46 : pari postico longiore ; articulo primo



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intus spinuloso : femoribus secundis expansionibus lamelliformibus confluentibus antice subrectis denticulatis fissura divisis. *Oculi* 8 stemmatiformes : 4 utrinque figuram subrhomboidalem delinientes.

* *Corporis segmenta elongata aut subelongata irregularia.*

Sp. 1. *Scolopendra morsitans.*

S. corpore fusco, pedibus dilutioribus.

Scolopendra morsitans. Donov. Ins. Ind.

Habitat in India.

** *Corporis segmenta transversa alternantia ; quinto et sexto subæqualibus.*

Sp. 2. *Scolopendra alternans.*

TAB. 138.

S. pedibus posticis articulo primo tereti interne spinuloso.

Scolopendra alternans. Leach Trans. Linn. Soc. 11. 383.

—— *Enc. Brit. Suppl. 1. 431.*

pl. 22.

Habitat

Sp. 3. *Scolopendra subspinipes.*

S. pedibus posticis articulo primo subtereti supra plano ad apicem interne subspinoso.

Scolopendra subspinipes. Leach Trans. Linn. Soc. 11. 383.

—— *Encycl. Brit. Suppl. 1. 430.*

Habitat

Mus. Brit.

Sp. 4. *Scolopendra trigonopoda.*

S. pedibus posticis trigonis, articulo primo interne spinifero.

Habitat

Mus. Brit.

*** *Corporis segmenta subæqualia.*

Sp. 5. *Scolopendra Gigas.*

S. segmentis transverso-quadratis, angulis rotundatis ferrugineo-brunneis postice luteis, antennis pedibusque testaceis; femoribus (sex primis exceptis) articulo basilari (secundoque rarius) spinulosis.

Scolopendra Gigas. *Leach Trans. Linn. Soc.* 11. 383.

— *Enc. Brit. Supp.* 1. 431.

Habitat

Mus. Brit. et Jameson.

Pedes secundi ferruginei, unguibus apice nigris.

Corpus sub lente punctulatum.

Gen. IV. CRYPTOPS.

Antennæ conico-setaceæ 17-articulatæ; articulis globoso-subconicis. *Pedes* 46; pari postico longiore: articulo primo intus inerme; pari secundo femoribus expansionibus lamelliformibus confluentibus, antice vix emarginatis inermibus. *Oculi* obsoleti.

Sp. 1. *Cryptops hortensis.*

TAB. 139.

C. testaceo-ferrugineus, dorso saturatiore, pedibus pilosulis.

Cryptops hortensis. *Leach Edin. Encycl.* 7. 408.

— *Trans. Linn. Soc.* 11. 384.

— *Enc. Brit. Supp.* 1. 431. *pl.* 22.

Fig. 1. mag. nat. 2, 3, et 4, Animal, pes et antenna aucti.

Habitat in Angliæ Occidentalis hortis.

Sp. 2. *Cryptops Savignii.*

C. testaceo-flavus, capite pallide ferrugineo, pedibus posticis præsertim spinulosis.

Habitat in Musei Britannici horto.



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Gen. V. GEOPHILUS.

GEOPHILUS, *Leach*.

Antennæ 14-articulatæ cylindraceæ aut apicem versus sensim angustiores; articulis cylindraceis aut basi paululum angustioribus. *Pedes* plurimi; par secundum femoribus expansioribus lamelliformibus connatis antice vix fissura divisus; par ultimum aliis vix longius. *Oculi* obsoleti.

* *Antennæ articulis brevibus.*

Sp. 1. *Geophilus carpophagus*.

G. capite antennis anoque fulvescentibus, corpore violascente antice flavicante, pedibus pallide subflavis.

β. corpore obscure subviolascente-testaceo antice subtestaceo.

Geophilus carpophagus. *Leach Trans. Linn. Soc.* 11. 385.

—— *Encycl. Brit. Supp.* 1. 431.

Long. corp. 2—2½ unc.

Habitat in Angliæ hortis passim, fructibus victitans. *Scolopendram electricam auctorum esse putat Clariss. J. Banks.*

Caput flavum, fulvo varium; antennæ fulvescentes, articulis apice pallidis. Dorsum antice flavicans linea longitudinali flava utrinque violascente, parte ante medium usque ad segmentum ultimum violascente, linea longitudinali pallida; latera pallida linea undulata sinuosa cinereo-violascente. Venter dorsi coloris absque lineis marginalibus, parteque violascente pulcherrime colore saturatiore maculata. *Pedes* subflavi pallidi articulis saturatioribus, unguibus nigris.

Variat parte antica concolore, pedibusque posticis longioribus. Forte sexus alter.

Sp. 2. *Geophilus subterraneus*.

G. corpore flavo, capite ferrugineo.

Scolopendra subterranea. *Shaw Trans. Linn. Soc.* 2. 7.

Geophilus subterraneus. *Leach Trans. Linn. Soc.* 11. 385.

— *Encycl. Brit. Supp.* 1. 431.

Long. corp. $3\frac{1}{2}$ unc.

Habitat in Angliæ hortis.

Dorsum segmentis lateraliter prominulis, lineis duabus longitudinalibus abbreviatis impressis. Pedes articulis subferrugineis, unguibus nigricantibus.

In the living state, this species (which is extremely common in gardens in the western counties of England) may readily be distinguished from the preceding species by the longitudinal abbreviated lines.

In January, I observed beneath the earth in a garden, a cavity containing a female and twenty-six young ones*; they were of a pale yellow colour, with their heads darker yellow, and the joints of their legs slightly ferrugineous.

Sp. 3. *Geophilus maritimus*.

TAB. 140. Fig. 1—2.

G. linearis brunneo-ferrugineus, capite antennisque ferrugineis, pedibus fusco-luteis.

Long. corp. $1\frac{1}{2}$ unc. et ultra.

Habitat in Britannia inter scopulos ad littora maris vulgarissime.

Fig. 1. mag. nat. 2. Idem auctus.

Antennæ lineares.

* Varying very much in the number of their legs.



Sp. 4. *Geophilus acuminatus*.

G. corpore toto ferrugineo antice sensim angustiore, capite antice pedibusque dilutioribus.

Geophilus acuminatus. *Leach Trans. Linn. Soc.* 11. 431.

—— *Encycl. Brit. Supp.* 1. 431.

Long. corp. $1\frac{1}{2}$ unc.

Habitat in Britannia inter muscos rarior.

Antennæ lineares. Caput antice pedibus pallidius. Pedes dorso sub-pallidiores.

This is the rarest species of the genus that occurs in Great Britain: it is found amongst moss. I once found it in Battersea Fields, and have occasionally taken it on Dartmoor in Devon.

** *Antennæ articulis elongatis*.

Sp. 5. *Geophilus longicornis*.

TAB. 140. Fig. 3—6.

G. corpore flavo, capite ferrugineo, antennis longioribus.

Geophilus longicornis. *Leach Trans. Linn. Soc.* 11. 386.

—— *Encycl. Brit. Supp.* 1. 431.

pl. 22.

Long. corp. $2\frac{1}{2}$ —3 unc.

Fig. 3. mag. nat. 4. auctus. 5, 6. Antenna et pes aucti.

Habitat prope Londinum et Edinburgum sub lapidibus.

**XIII. On the Characters of the Class Arachnides
and of its Families.**

ARACHNIDES.

CHARACTER.

Caput cum Thorace coalitum : Antennæ nullæ : Pedes 12;
8 posticis ambulatoriis : *Ocelli 2, 4, 6 aut 8 glabri tho-*
racici.

Sacci pulmonales pro respiratione.

SYNOPSIS FAMILIARUM.

* *Abdomen articulis distinctis.*

Fam. I. SCORPIONIDEA. *Pedum* par anticum brevissi-
mum didactylum : par secundum elongatum
didactylum brachia æmulans : paria 4 postica
ambulatoria conformia, unguibus didactylis in-
structa ; femoribus 2 anticis dilatatis labium
accessorium efformantibus. *Ocelli 2, 4, 6,*
aut 8.

Fam. II. TARANTULIDEA ||. *Pedum* par anticum brevissi-
mum monodactylum : par secundum elongatum
monodactylum aut didactylum brachia æmu-
lans : par tertium longissimum tenuissimum ;
tarsis multiarticulatis exunguibus : paria 3 pos-
tica conformia ambulatoria, unguibus didactylis
instructa. *Ocelli 8.*

|| 1. *Tarantula, Fabr.* 2. *Thelephronus, Latr.*

Fam. III. PHALANGIDEA *. *Pedum* par anticum ab brevium deflexum didactylum: par secundum breve subraptorium ungue simplici instructum: paria 4 postica inæqualia ambulatoria, unguibus didactylis instructa; paribus 2 et 4 longioribus. *Ocelli* 2.

Fam. IV. SOLPUGIDEA †. *Pedum* par anticum breve crassum porrectum didactylum: paria 2 et 3 subambulatoria femoribus confluentibus labium accessorium efformantibus; tarsis exunguibus: paria 4, 5 et 6 ambulatoria; tarsis ungue didactylo instructis. *Ocelli* 4.

** *Abdomen articulis obsoletis aut nullis.*

Fam. V. ARANIDEA ‡. *Pedum* par anticum breve crassum sæpius deflexum monodactylum: par secundum breve subambulatorium; tarsis exunguibus: paria 3, 4 et 5 conformia (longitudine inæqualia) ambulatoria; tarsis ungue didactylo instructis. *Ocelli* 6 aut 8. *Anus* papillis textoriis.

OBS. All the *Arachnides Trachéennes* of Latreille, excepting the Genera *Pycnogonum*, *Phoxichilus*, *Ammothoa* and *Nymphum* (whose situation is doubtful), and the Genera *Phalangium*, *Solpuga* and *Trogulus* (and perhaps *Siro*), constitute a peculiar Class, which I have proposed to name ACARI.

* 1. *Phalangium*, Latr. 2. *Trogulus*, Latr.

† *Galeodes*, Latr. *Solpuga*, Fabr. *Rhax*, Hermann.

‡ Fam. *Araneides*, Latr.

**XIV. On the Characters of the Genera of the
Family Scorpionidea, with Descriptions of the
British Species of Chelifer and Obisium.**

SCORPIONIDEA.

Pedum par secundum articulo ultimo incrassato.

SYNOPSIS STIRPIUM ET GENERUM.

<i>Stirps</i> 1. Cauda nulla.	<i>Genera.</i>
Corpus depressum. Oculi 2. Pedes 8 pos- tici 5-articulati. - - - -	1. CHELIFER.
Corpus sub-cylindraceum. Ocelli 4. Pedes 8 postici 6-articulati. - - - -	2. OBISIUM.
<i>Stirps</i> 2. Cauda articulis 6 : ultimo acule- ato ; aculeo arcuato venifero. (Corpus depresso-cylindraceum. Pedes 8 postici 6-articulati.)	
Ocelli 6. - - - - -	3. * SCORPIO.
Ocelli 8. - - - - -	4. BUTHUS.

Stirps 1.

The ocelli of the animals of this division are placed on the sides of the anterior segment of the body or thorax. They want the tail and the pectinated processes near the base of the abdomen, by which they may very easily be distinguished from those of the second stirps, with which they were formerly arranged by Fabricius, under the title *Scorpio*. Two species only were known to Linné, who re-

* *Scorpio Europæus auctorum.*

ferred them to his artificial Genus *Phalangium*. The greater number of the species live beneath the bark of decaying trees or under stones; but one at least is parasitical, and attaches itself to the legs of flies.

Latreille believes that they breathe by tracheæ, and therefore refers them to the second order of his *Arachnides*. See *Cuv. Reg. Anim.* 3. 108.

DESCRIPTIONES ET SYNONYMA SPECIERUM.

CHELIFER.

TAB. 142.

CHELIFER, *Geoff.*, *De Geer*, *Latr.*, *Leach*, &c.

Thorax linea transversa impressus. *Pili* corpori s spatulæ-formes. *Pedum* par secundum digitis curvatis.

Sp. 1. *Chelifer Hermannii*.

Fig. 3.

C. pedibus secundis articulis 3 et 4 elongatis tenuibus a basi ad apicem gradatim crassioribus, articulo 5 elongato tenui; digitis longis.

Long. corp. $1\frac{3}{4}$ lin.

Habitat sub arborum cortice.

Ferrugineo-testaceus, abdomine segmentis margine pallidis.

Sp. 2. *Chelifer Latreillii*?

Fig. 5.

C. pedibus secundis articulo 3 a basi ad apicem gradatim crassiore, articulo 4 elongato-ovali; basi attenuato, articulo 5 ovato; digitis mediocribus.

Long. corp. $1\frac{3}{4}$ lin.

Habitat cum præcedente. An alter sexus?

Ferrugineus, abdomine lateribus et margine segmentorum pallidis, thorace pedibusque secundis fuscatis.

Sp. 3. *Chelifer Olfersii*.

Fig. 2.

C. pedibus secundis articulo 3 mediocri; medio crassiore, articulo 4 ovato, articulo 5 crasso ovato; digitis brevibus.

Long. corp. $1\frac{3}{4}$ lin.

Habitat

Ferrugineus, abdomine subfuscescente segmentis pallido-marginatis.

Sp. 4. *Chelifer Geoffroyi*.

Fig. 1.

C. pedibus secundis articulo 3 subcylindraco, articulo 4 ovato, articulo 5 ovato crasso; digitis brevibus.

Chelifer fuscus, abdomine lineis transversis. *Geoff. Hist. des Ins.* 2. 608.

Chelifer fasciatus. *Leach Trans. Linn. Soc.* 11. 391.

—— *Encycl. Brit. Supp.* 1. 433. pl. 22.

Long. corp. $1\frac{3}{4}$ lin.

Habitat sub cortice arborum. An præcedentis sexus alter?

Fusco-ferrugineus, abdomine lateribus margineque segmentorum pallidis. Pedes 8 postici livido-testacei. Thorax et pedes 4 antici fusco-ferruginei.

Sp. 5. *Chelifer Museorum*.

Fig. 4.

C. pedibus secundis articulo 3 elongato cylindraco, articulo 4 clavato; basi valde attenuato, articulo 5 ovato; digitis mediocribus.

Long. corp. $\frac{3}{4}$ lin.

Habitat in museis frequentissime.

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OBISIUM.

TAB. 141.

OBISIUM. *Illiger, Leach.*

Pedum par anticum multo majus quam in genere præcedente. *Thorax* linea nulla impressus.

Sp. *Obisium orthodactylum.*

Fig. 2.

O. pedibus secundis articulo 3 subcylindraceo apice paulo crassiore, articulo secundo brevi inverse conico, articulo ultimo subcylindraceo; digitis longis rectis.

Chelifer ischnochelus. *Herm. Mem. Apter.* 118. pl. 6. f. 14?

Chelifer Trombidioides. *Latr. Gen. Crust. et Ins.* 1. 433.

Obisium Trombidioides. *Leach Trans. Linn. Soc.* 11. 391.

— *Encycl. Brit. Suppl.* 1. 433. pl. 23.

Long. corp. lin. $1\frac{1}{2}$.

Habitat sub lapidibus, in Danmonia et Cantia vulgarissime.

Color sæpius pallidus totus. Variat abdomine livido pallido-marginato; pedibus 8 posticis testaceis; 4 anticis thoraceque fusco-ferrugineis.

Sp. 2. *Obisium Muscorum.*

Fig. 3.

C. pedibus secundis articulo 2 cylindraceo, 3 ovato; basi attenuato, 4 ovato; digitis longis curvatis.

Long. corp. 2 lin.

Habitat sub muscis. In montibus Caledoniæ vulgarissime, in Anglia rarius.

Color sæpius fuscescens aut rufo-brunneus; pedibus pallidis.

Sp. 3. *Obisium maritimum*.

C. pedibus secundis articulo 2 cylindraceo, 3 ovato; basi attenuato, 4 ovato; digitis brevibus subcurvatis.

Long. corp. 2—2½ lin.

Habitat in Anglia occidentali inter rupes ad littora maris.
Communicavit Dom. C. Prideaux.

Color livido-fuscus, pedibus 4 anticis pallide ferrugineis; 8 posticis pallidis.

Thorax antice nonnunquam ferrugineus.

Stirps 2.

The nervous system of the animals composing this stirps consists of eight ganglia, brought into communication by two nervous cords, which are generally confluent between the hindermost ganglia. The first ganglion is situated behind and above the origin of the first pair of legs; it is larger than the others, and its hemispheres are well defined; it receives the optic nerves as well as nerves from the direction of the first branchiæ: the three following ganglia are abdominal, and distinctly receive nerves from the branchial regions: the other four ganglia are placed within the four first joints of the tail; and the last receives nerves from the terminal joint which bears the sting.

In the specimens that I have examined (taken out of alcohol), not the slightest traces of the nerves arising from the viscera and joining the abdominal ganglia as described by Treviranus* and Dufour† could be discovered.

* Heber den innern Bau der Arachniden.

† Journal de Physique, 1817, p. 439.





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BUTHUS.

TAB. 143.

BUTHUS. *Leach.*

B. melleo-flavescens, thorace supra lineolis granulosi sculpto, manibus ovatis lævigatis, cauda articulis costato-granulatis; ultimo globoso lævissimo.

Scorpio occitanus. *Amoureux Journ. de Phys.* 1. 1789.

Latr. Gen. Crust. et Ins. 1. 132.

Dufour Journ. de Phys. 1817. 439.

Leach Edin. Encycl. 7. 428.

Buthus occitanus. *Leach Trans. Linn. Soc.* 11. 391.

— *Encycl. Brit. Supp.* i. 434.

Habitat in Hispaniæ montibus calidis aridis sub lapidibus frequens.

This is the animal with whose poison Redi and Mauerperts made their experiments.

XV. *Descriptions of three Species of the Genus
Phthiridium of Hermann.*

—
PHTHIRIDIUM.

PHTHIRIDIUM. *Hermann, Olfers, Leach.*

NYCTERIBIA. *Latreille.*

Thorax depressus antice os in dorsum gerens : *pedes* 6 laterales ; *femora* articulis 2, secundo longo compresso ; *tibiæ* articulis 2, primo longiore compresso, secundo gracili arcuato ; *tarsi* articulis 5, tribus primis (gradatim brevioribus) brevibus, quarto longiore apicem versus gradatim latiore, quinto brevior *ungue* didactylo instructo.

Abdomen in utroque sexu 8-articulatum ; (FÆMINÆ ? segmento primo dorsali producto, segmenta quatuor sequentia tegente ; segmento ultimo utrinque stylo apice setigero instructo : MARIS ? segmento ultimo majore.)

OBS. Pectus postice productum recte truncatum ; margine setis rigidis brevibus atris dense ciliato.

Habitant Phthiridia in Vespertilionidea inter pilos.

This Genus was established in 1804 by Hermann, who named it *Phthiridium*, and in the following year it was observed by Latreille, who called it *Nycteribia*.

Its situation is extremely doubtful ; it was referred to the *Diptera* by Latreille, who observes in a note that it may probably be found hereafter to constitute a peculiar order of insects. From the want of antennæ, and from the confluence of the head and thorax, I placed it amongst the *Arachnides*, in a division by itself. Its mode of propaga-



tion is unknown. Hermann considered the sexual as specific differences.

Sp. 1. *Phthiridium Blainvillii*.

Ph. pedibus longis tenuibus ; femoribus articulo 2 tibiisque articulo 1 apicem versus gradatim attenuatis.

Long. corp. $1\frac{3}{4}$ lin.

Habitat in Insula Isle de France. Benigne mihi communicavit amicus Blainville. Minor Phthiridio Hermannii.

This is probably the species alluded to by Latreille in his *Genera*, p. 364.

Sp. 2. *Phthiridium Hermannii*.

TAB. 144. ♂, ♀ et pes aucti.

Ph. pedibus longis; femoribus articulo 2 apicem versus gradatim attenuato; tibiis articulo 1 ultra medium subtus gradatim dilatato apicem versus gradatim attenuato.

Phthiridium biarticulatum. *Herm. Mem. Apt.* 124. *pl.* 6. *f.* 1.
Olfers 80.

Hippobosca Vespertilionis. *Schr. Fn. Brit.* 2587.

Phthiridium Hermannii. *Leach. Encycl. Brit. Suppl.* 1.
446. *pl.* 23.

Celeripes Vespertilionis. *Mont. Trans. Linn. Soc.* 11. 11.
t. 3. *f.* 5.

Long. corp. 2 lin.

Habitat in Rhinolopho Ferro-equino vulgatissime.

Stili caudales (fœminæ) elongati cylindranei.

In the plate representations are given of the sexes very much magnified, with one leg still more highly increased by the aid of the microscope. The second joint of each tibia is longer than all the joints of the tarsus taken together.

Sp. 3. *Phthiridium Latreillii*.

Ph. pedibus brevibus; femoribus articulo 2 lato; tibiis articulo 1 infra valde dilatato.

Nycteribia Vespertilionis. *Latr. Gen. Cr. et Ins.* 4. 364?

Nycteribia pedicularia. *Latr. Hist. Nat. des Cr. et des Ins.* 14. 403?

Pediculus Vespertilionis. *Linn. Fn. Sv.* 1941.

Phthiridium pediculare. *Olfers* 79.

Long. corp. $1\frac{1}{4}$ lin.

Habitat in Vespertilione murino.

The second joint of each tibia about the length of the tarsus.

XVI. *On the Characters of the Class Insecta,
and of the Orders composing it.*

INSECTA.

CHARACTER.

Corpus 3-partitum, e capite thorace abdomineque constans.

Caput a thorace distinctum, oculis 2: *Antennis* 2: *mandi-
bulis* 2: *labio* e maxillis exterioribus confluentibus ef-
formato.

Thorax 6-pedatus, sæpe alatus.

Abdomen articulatum.

Tracheæ pro respiratione.

The following arrangement of Insects into Orders I proposed several years since, in the 9th volume of the *Edinburgh Encyclopædia*, and have since republished it with some alterations in the characters of the Orders, in the first volume of the Supplement to the *Encyclopædia Britannica*.

Subclassis I. AMETABOLIA.

Insecta transformatione nulla.

Ordines.

Abdomen setis terminatum. - 1. THYSANURA.

Abdomen apice simplici. - 2. ANOPLURA.

Subclassis II. METABOLIA.

Metamorphosis triplex.

A. *Os mandibulis maxillis labioque perfectis. (Alæ 2 elytris tectæ.)*

a. *Metamorphosis incompleta.*

Ordines.

Alæ transversim plicatæ. - - 3. COLEOPTERA.

b. *Metamorphosis semicompleta.*

Alæ longitudinaliter et transversim plicatæ. Elytra (brevia) sutura recta. 4. DERMAPTERA.

Alæ longitudinaliter plicatæ. Elytra sutura recta. - - - 5. ORTHOPTERA.

Alæ longitudinaliter plicatæ. Elytra cruciata. - - - 6. DICTUOPTERA.

B. *Os mandibulis et maxillis setiformibus. Alæ 4 : posticæ longitudinaliter plicatæ. (Metamorphosis semicompleta.)*

Alæ anticæ cruciatae coriaceæ apice membranaceæ. - - - 7. HEMIPTERA.

Alæ anticæ coriaceæ aut membranaceæ ; sutura recta. - - - 8. OMOPTERA.

C. *Os mandibulis maxillis labioque elongatis subsetaceis. Alæ 0. (Metamorphosis incompleta.)*

Corpus compressissimum. - - 9. APTERA.

D. *Os mandibulis abbreviatis incompletis. Labium et maxillæ basi saltem coalitæ. Alæ 4. (Metamorphosis incompleta.)*

Ordines.

Maxillæ in linguam spiralem productæ. Alæ sæpius squamosæ. - 10. LEPIDOPTERA.

Maxillæ et labium coalitæ; illis processu trigono instructis. Alæ pilosæ. - - - - - 11. TRICHOPTERA.

E. *Os mandibulis maxillis et labio perfectis.*

a. *Alæ 4.*

Alæ membranaceæ reticulatæ sæpius æquales. (Metamorphosis subsemi-completa.) - - - - - 12. NEUROPTERA.

Alæ membranaceæ venosæ; posticæ minores. (Metamorphosis incompleta.) - - - - - 13. HYMENOPTERA.

b. *Alæ 2.*

Alæ longitudinaliter plicatiles. (Metamorphosis subcoarctata.) - - - 14. RHIPIDPTERA.

F. *Os mandibulis et maxillis elongatis: labio proboscidiiformi. Alæ 2. Halteres 2 pone alas. (Metamorphosis incompleta aut coarctata.)*

Tarsi unguibus duobus simplicibus instructi - - - - - 15. DIPTERA.

G. Os mandibulis et maxillis elongatis: labio simplici. Alæ 2 aut 0. Halteres 0. (*Metamorphosis coarctata.*)

Tarsi unguibus quasi duplicati aut ternati. - - - - - Ordines. 16. OMALOPTERA.

XVII. *On the Families, Stirpes, and Genera of the
Order Thysanura.*

THYSANURA.

SYNOPSIS FAMILIARUM, STIRPIUM, ET GENERUM.

Fam. I. LEPISMIDEA.

LEPISMENÆ. *Latreille.*

LEPISMA. *Linné, &c.*

Antennæ multiarticulatae. *Palpi* exserti, elongati. *Abdomen* articulo ultimo setis tribus exsertis. (*Corpus* squamulosum.)

Stirps 1. *Antennæ* inter oculos insertæ. *Palpi* maxillares tenues articulo ultimo gracili cylindraceo. *Oculi* parvi remoti e granulis compositi. *Corpus* depressum; setis caudalibus subæqualibus in eadem fere linea horizontali insertis.

Genera.

Corpus haud saltatorum. - - 1. LEPISMA*.

Stirps 2. *Antennæ* sub oculis insertæ. *Palpi* maxillares pediformes crassiusculi articulo ultimo subconico. *Oculi* magni compositi contigui. *Corpus* convexum; setis caudalibus inæqualibus, superiore longiore.

* *Lepisma, Latr. &c Setoura, Brown.*

Antennæ corpore longiores. *Corporis*
 articulus penultimus appendi-
 cibus duobus biarticulatis; ar-
 ticulo 2 setaceo. - - 2. PETROBIUS.

Antennæ corpore breviores. *Corporis*
 articulus penultimus appendi-
 cibus duobus biarticulatis; ar-
 ticulo 2 compresso acutissimo. 3. FORBICINA*.

Fam. II. PODURIDEA.

PODURELLÆ. *Latreille*.

PODURA. *Linné, Fabricius, &c.*

Antennæ 4-partitæ. *Palpi* breves, re-
 conditi. *Abdomen* articulo ultimo
 furcato; laciniis mobilibus inflexis.

(*Corpus* squamosum aut hirsutum.)

Antennæ rectæ filiformes: segmento
 ultimo integro. *Corpus* cylin-
 draceum. - - 4. PODURA †.

Antennæ quasi geniculatæ: segmen-
 to ultimo multi-articulato.
Corpus subglobosum. - 5. SMYNTHURUS ‡.

PETROBIUS.

PETROBIUS. *Leach*.

Sp. 1. *Petrobius maritimus*.

TAB. 145.

P. nigricans, squamis auratis; pedibus flavicantibus, setis
 caudalibus albo-annulatis.

* Forbicina, *Geoffroy*. Machilis, *Latr.*, *Leach*.

† Podura, *Latreille*.

‡ Smynthurus, *Latreille*.



Engraved & Published by R. P. Noöder Tavistock St. London.

Petrobius maritimus, *Leach Edin. Encycl.* 9. 77.

— *Encycl. Brit. Supp.* 1. pl. 24.

Habitat in Britannia inter scopulos ad littora maris.

This species, which was first described by myself in the works quoted above, is found in the greatest plenty on all the rocky coasts of Great Britain and Ireland. It is very active, runs fast, and leaps to a great distance.

I am inclined to suspect that it has been confounded by Fabricius with *Forbicina polypoda*, (*Lepisma polypoda* Linné.)

XVIII. *On the Families, Stirpes, and Genera of the
Order Anoplura.*

ANOPLURA.

PARASITA. *Latreille.*

ANOPLURA. *Leach.*

SYNOPSIS FAMILIARUM, STIRPIUM, ET GENERUM.

Fam. I. PEDICULIDEA.

Os mandibulis maxillis et labio in haustellum productis.

Tarsi didactyli aut ungue simplici instructi.

Stirps 1. Thorax brevissimus indistinctus.

Genera.

Pedes 2 antici monodactyli; 4 postici
didactyli. *Abdomen* capite ab-
rupte latius. - - -

1. PHTHIRUS.

Stirps 2. Thorax distinctus mediocris.

(*Pedes omnes didactyli.*)

Thorax abdomine abrupte angustior.

Abdomen latissimum. - -

2. HÆMATOPINUS.

Thorax abdomine non angustior. *Ab-*

domen lineare. - -

3. PEDICULUS.

Fam. II. NIRMIDEA.

Os maxillis labioque confluentibus:

mandibulis curvatis liberis. *Tarsi*

unguibus duobus æqualibus instructi.

- - - - 4. NIRMUS.



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Fam. I. PEDICULIDEA.

All the animals of this family inhabit the bodies of mammiferous animals. Latreille and all other authors have considered them as constituting one genus, which I have divided into—

Gen. I. PHTHIRUS.

PHTHIRUS. *Leach.*

Sp. 1. *Phthirus inguinalis.*

Ph. corpore albido, abdomine segmentis lateraliter prominulis.

Pediculus inguinalis. *Redi Exper. t. 19.*

Pediculus pubis *auctorum.*

Phthirus inguinalis. *Leach Edinb. Encycl. 9. 77.*

Pediculus fesus. *Olfers 83.*

Habitat in hominis pube, grandebulis, villis, superciliis, ciliis, mustacibusque, cuti adhærens.

This animal is commonly named *crab-louse*, or *morpion*.

Gen. II. HÆMATOPINUS.

HÆMATOPINUS. *Leach.*

Sp. 1. *Hæmatopinus Suïs.*

TAB. 146.

H. capite antennis thorace pedibusque subfulvescentibus fusco-variis, abdomine cinereo-albido : segmentis lateraliter prominulis nigris ; ultimo maculis duabus nigris, pectore albido.

Pediculus Suis. *Linn. Syst. Nat.* 1. 1017.

Schrank. Fn. Boic. 3. 2608.

Olfers 86.

Hæmatopinus Suis. *Leach Encycl. Brit. Supp.* 1. pl. 24.

Habitat in sue scrofa.

In the annexed plate the insect is represented of its natural size and magnified, with a leg and antenna highly magnified.

Gen. III. PEDICULUS.

PEDICULUS auctorum.

Sp. 1. *Pediculus humanus.*

P. abdomine lobato albido subimmaculato.

Latr. Gen. Crust. et Ins. 1. 168.

Pou humain du corps. *De Geer Mém.* 7. 67.

Pediculus humanus auctorum.

Pediculus pubescens var. α . *Olfers* 80.

Habitat in hominum vestimentis cute.

This species, which is very common in the warmer parts of Europe, is rare in England. It is called *body-louse* or *tailor's-louse* *.

Sp. 2. *Pediculus cervicalis.*

P. abdomine lobato cinereo, utrinque fascia nigra interrupta. *Latr. Gen.* 1. 168.

Pou humain de la tête. *De Geer Mém.* 7. 67.

Pediculus humanus var. *Linn. Syst. Nat.* 1. 1016.

Habitat in capite hominum.

* No naturalist seems to be acquainted with the animal which causes that dreadful disease named *Phthiriasis* or *morbus pediculosus*, described as being incurable.

This is the *head-louse* so common in the heads of children of the lower classes. It may easily be killed by the application of calomel.

Gen. IV. NIRMUS.

NIRMUS. *Hermann., Olfers, Leach.*

RICINUS. *De Geer, Oliv., Lamarck, Latreille.*

It is now almost fully established, that every species of bird has its own peculiar parasite, no instance having occurred, in which one species of *Nirmus* has been found on two different birds, although many birds have two or three species peculiar to themselves. The importance therefore of clear descriptions of these animals is so very important to the ornithologist, that it is to be hoped that every naturalist who has opportunity to investigate the subject, and to describe the species, will not omit to do so.

XIX. *Synopsis of the Stirpes and Genera of the
Family Dyticidea.*

—
DYTICIDEA.

HYDROCANTHARI. *Latreille,*

DYTICUS. *Geoffroy.*

DYTISCUS. *Linné, &c.*

SYNOPSIS STIRPIUM ET GENERUM.

A. *Scutellati. Pedes omnes gressorii : tarsis omnibus 5-articulatis ; unguibus didactylis.*

Genera.

*Stirps 1. Femora postica basi lamella
clypeiformi tecta,*

*Palpi maxillares externi et labiales
subulati - - - -*

1. HALIPLUS.

*Stirps 2. Femora postica basi libera.
(Oculi prominuli.)*

*Palpi maxillares externi articulo ul-
timo subclavato - - -*

2. PÆLOBIUS.

B. *Exscutellati. Pedes postici subna-
tatorii, aut natatorii.*

*Stirps 3. Tarsi quatuor antichi 4-arti-
culati : duo postici 5-arti-
culati.*

*Corpus fere globosum. Tarsi 4-antichi
articulo ultimo brevi : ungues
postici monodactyli - -*

3. HYPHYDRUS.

Corpus ovale aut elongatum latitudine
 altitudinem superans. *Tarsi*
 4-antici articulo ultimo graci-
 li: *ungues* omnes didactyli - 4. HYDROPORUS.

Stirps 4. *Tarsi* omnes 5-articulati.

Antennæ articulo quinto aut septimo
 dilatato. *Pedes postici* sub-
 natatorii - - - 5. NOTERUS.

Antennæ articulis simplicibus. *Pedes*
postici natatorii - - 6. LACCOPHILUS.

C. *Scutellati*. *Pedes postici* valde
 compressi natatorii: *tarsi* omnes
 5-articulati.

Stirps 5. *Tibiæ* posticæ elongatæ: un-
 gues postici didactyli.

Palpi maxillares externi articulis 2 et
 3 æqualibus; 4 longiore subulato 7. AGABUS.

Palpi maxillares externi articulis 2 et
 3 æqualibus; 4 longiore apice ob-
 tuso - - - 8. COLYMBETES.

Palpi maxillares externi articulo 2 se-
 quenti brevior; 3 et 4 longitudine
 æquales, hoc subulato - - 9. HYDATICUS.

Palpi maxillares externi articulo 2
 obconico; 3 elongato-obconico, 4
 subcylindrico longiore apice rotun-
 dato - - - 10. ACILIUS.

Palpi maxillares externi articulis 3
 exterioribus æqualibus; ultimo me-
 dium versus gradatim dilatato,

apice decrescente oblique subtruncato - - - -

11. DYTICUS.

Stirps 6. Tibiæ posticæ breves latissimæ : ungues postici monodactyli.

Palpi maxillares externi articulis 2 et 3 elongato-obconicis : 4 longiore medio externe subdilatato apice recte truncato - - -

12. TROGUS.

SYNONYMA GENERUM.

Gen. I. HALIPLUS.

HALIPLUS. *Latreille, Gyllenhal, Leach.*

CNEMIDOTUS. *Illiger.*

HOPLITUS. *Clairville.*

* *Corpore oblongo-ovali. Elytra carinulata.*

Dytiscus elevatus. Panz. Fn. Ins. Germ. 14. 9.

** *Corpore ovali. Elytra stria nulla elevata.*

1. *Dyt. ferrugineus Linn.* 2. *H. impressus Gyll.* 3. *D. flavicollis Marsh.* *D. cæsus Duf. Fr. Aus. et var.?* *D. ruficollis Marsh?* 4. *D. assimilis Marsh.* 5. *D. lineatocollis, Marsh.* 6. *obliquus, Gyll.*

Gen. II. PÆLOBIUS.

PÆLOBIUS. *Schönherr, Leach.*

HYGROBIA. *Latreille.*

HYDRACHNA. *Fabr.*

1. *H. Hermannii. Fabr.*

Gen. III. HYPHYDRUS.

HYPHYDRUS. *Latr., Gyll., Illig., Schönh.*1. *D. ovatus. Linné.*

Gen. IV. HYDROPORUS.

HYDROPORUS. *Clairville, Latreille, Leach.*HYPHYDRUS. *Illig., Schönh., Gyll.** *Corpore elongato.*Dytici *auctorum*: 1. 12-pustulatus, 2. depressus, 3. lineellus, &c.** *Corpore ovato.*Dytici *auctorum*: 1. confluens, 2. trifidus, 3. flexuosus, &c.

Gen. V. NOTERUS.

NOTERUS. *Clairville, Latreille, Leach.*Sp. 1. *Noterus Geerii.*

N. elytris lineis tribus punctorum impressis.

Dytiscus crassicornis, *auctorum.*Dytiscus clavicornis. *De Geer Mém. 4. 402.*

Habitat in stagnis Europæ.

Sp. 2. *Noterus sparsus.*

N. elytris punctis sparsis impressis.

Dytiscus sparsus. *Marsh Ent. Brit. 1. 430.*

Habitat in aquis stagnantibus prope Londinum frequens.

Gen. VI. LACCOPHILUS.

LACCOPHILUS. *Leach.*

1. *Dytiscus hyalinus Marsh.* *D. interruptus Panz?* 2. *D. minutus Linn.* *D. obscurus Panz.* *D. marmoreus Oliv.*

Gen. VII. AGABUS.

Antennæ MARIS ad apicem dilatatae compressae serratae.Sp. 1. *Agabus Paykullii.*

1. *Dytiscus serricornis. Payk. Fn. Sv. 3. 443.*

Habitat in Lapponiæ aquis.

Gen. VIII. COLYMBETES.

COLYMBETES. *Clairville, Latreille, Leach.*

Dytisci: 1. *striatus*, 2. *fenestratus*, 3. *carbonarius*, &c. *auctorum.*

Gen. IX. HYDATICUS.

HYDATICUS. *Leach.*

Tarsi antici MARIS articulis tribus basilaribus patellam efformantibus. ♀ *Thorace* utrinque ruguloso, *elytris* lævibus.

Dyticus auctorum, 1. *Hybneri* (*parapleurus Marsh*), 2. *transversalis*, 3. *stagnalis*, 4. *vittatus*, 5. *stricticus*, &c.

Gen. X. ACILIUS.

Tarsi antici MARIS articulis tribus basilaribus patellam efformantibus. *Elytra* ♀ *sulcata.*

Dyticus 1. *sulcatus auctorum.*

Gen. XI. DYTICUS.

DYTICUS. *Geoff., Illig., Latr., Leach.*

DYTISCUS *auctorum.*

Tarsi antici in masculis articulis tribus basilaribus patellatis. *Elytra* ♀ sulcata.

* *Elytra margine dilatato.*

1. Dyticus latissimus.

** *Elytra margine non dilatato.*

Dytici: 1. marginalis, 2. lapponicus, 3. dimidiatus, 4. punctulatus, &c.

OBS. Hujus sectionis feminæ variant elytris sulcis obsoletis aut nullis.

Gen. XII. TROGUS.

Tarsi antici ♂ articulis tribus primis patellatis. *Elytra* ♀ sæpius dense striolata.

1. Dyticus lateralis, &c.

XX. *On the Natural Characters of Four Genera, which have been confounded under the Name Silpha.*

SILPHA.

SYNOPSIS GENERUM.

1. NECRODES. *Corpus* elongato-ovale. *Thorax* orbicularis. *Elytra* apice oblique truncata. *Antennæ* gradatim extrorsum crassiores.
2. OICEOPTOMA. *Corpus* ovale. *Thorax* fere semicircularis transversus, antice emarginatus. *Elytra* integra (fœminæ sæpe emarginata). *Antennæ* clava abrupta.
3. SILPHA. *Corpus* ovale. *Thorax* semicircularis antice truncatus. *Elytra* integra. *Antennæ* gradatim extrorsum crassiores.
4. PHOSPHUGA. *Corpus* ovale aut subrotundum. *Thorax* semicircularis postice abrupte truncatus. *Elytra* integra. *Antennæ* articulis tribus ultimis præcedentibus abrupte crassioribus.

SYNONYMA GENERUM.

Gen. I. NECRODES.

NECRODES. *Wilkin Mss., Leach**.

Silpha 1. littoralis, &c.

* Zool. Misc. 2. 87.

Gen. II. OICEOPTOMA.

OICEOPTOMA. *Leach* †.* *Elytra in utroque sexu integra.*Silphæ: 1. thoracica, 2. rugosa, &c. *auctorum.*** *Elytra ♀ apice emarginata.* (THANATOPHILUS, *Leach.*)Silphæ: 1. sinuata *Fabr.* 2. dispar *Illig.* &c.

Gen. III. SILPHA.

* *Elytra lineis elevatis tribus.*

Silphæ: 1. opaca *Linn.* tomentosa *Marsh.* 2. reticulata
Fabr. granulata *Marsh.* 3. nigrita *Creutz.* β. bicolor
Haworth. 4. tristis *Illig.* recta *Marsh.* 5. obscura
Linn. &c.

** *Elytra lævia simplicia.*Silpha lævigata. *Fabr.*

Gen. IV. PHOSPHUGA.

Sp. 1. *Phosphuga atrata.*

Ph. ovata nigra, elytris rugoso-punctatis lineis tribus elevatis.

Silpha atrata *auctorum.*Sp. 2. *Phosphuga subrotundata.*

Ph. subrotundata nigra, elytris rugoso-punctatis lineis tribus elevatis.

Habitat in Hibernia australi sub lapidibus rarior.

Major P. atrato.

† *Edinb. Encycl.* 9. 89.

XXI. *A Sketch of the Characters of the Stirpes
and Genera of the Family Histeridea.*

HISTERIDEA.

HISTER. *Linn., Fabr., Latr., &c.*

HISTEROIDES. *Gyll., Payk.*

Antennæ geniculatæ, clava 3-articulata subsolida terminata,

Elytra abdomine breviora, margine laterali inflexa.

Tarsi contractiles 5-articulati.

SYNOPSIS STIRPIUM ET GENERUM.

Stirps 1. Corpus crassum subgloboso-quadratum. Tibiæ
angustæ elongatæ: tarsi elongati graciles,
Sternum simplex.

Antennæ articulo 1 mediocriter elongato; articulis 2 et 3 subcylindricis; hoc præcedente angustiore; articulo 4 brevi; articulis 5, 6 et 7 subglobosis subæqualibus; 8 lenticulari-subgloboso; 9, 10 et 11 clavam breviovatam efformantibus

Genera.

1. ABRÆUS.

Antennæ articulo 1 longo; articulo 2 cylindrico basi abrupte coarctato; 3 obconico; 4 et 5 breviter obconicis; 6 et 7 brevibus subglobosis; 8 sublenticulari; 9, 10 et 11 clavam ovatam efformantibus

2. ONTHOPHILUS.

Stirps 2. Corpus depressum. Tibiæ
latæ : tarsi breves. Sternum
valde dilatatum supra con-
cavum os (præter mandibu-
las) recipiens.

A. Tibiæ 4 posticæ duplici serie spinosæ.

Corpus supra subconvexum. Thorax
antice angustatus - - 3. HISTER.

B. Tibiæ 4 posticæ simplici serie spi-
nulosæ.

Corpus supra subconvexum. Thorax
brevissimus antice angustatus 4. DENDROPHILUS.

Corpus supra planum. Thorax trans-
versim aut æqualiter subqua-
dratus - - - 5. PLATYSOMA.

Stirps 3. Corpus valde depressum
complanatum. Tibiæ latæ :
tarsi mediocres. Sternum
simplex antice truncatum,
mandibulæ æquales eden-
tulæ - - - 6. HOLOLEPTA.

OBS. Hister proboscideus *Payk. Monog. Hist.* 88. t. 8. f. 4.
et Hololepta maxillosa *Payk. t. 9. f. 7.* genera forte
propria.

Instrumenta cibaria hujus familiæ sedulose examinanda.

Utinam exurgat Bonelli!

SYNONYMA GENERUM.

Gen. I. ABRÆUS.

Histeres : 1. globosus *Ent. Heft.* 1. 100. t. 2. f. 1. 2. minutus *Fabr.*, perpusillus *Marsh.*, &c.

Gen. II. ONTHOPHILUS.

Histeres : 1. striatus *Payk. Monog. Hist.* 100. t. 11. f. 1. 2. sulcatus *Payk. Monog. Hist.* 99. t. 10. f. 8.

Gen. III. HISTER.

*Histerium Britanniae Enumeratio.*A. *Elytra striis externis integris.*a. *Thorace lateribus longitudinaliter striatis.** *Elytra stria marginali.*

Histeres : 1. unicolor *auct.* inæqualis *Marsh.* 2. cadaverinus *Payk.* unicolor *Marsh.*

** *Elytra stria marginali nulla.*

3. sinuatus *Illig.* 4-maculatus *Marsh.* 4. 4-notatus *Illig.*

b. *Thorace lateribus non striatis.** *Elytra stria marginali nulla.*

5. 12-striatus *Payk.* 6. 2-maculatus *Linn.* 7. parvus *Marsh.*

**** *Elytra stria marginali.***

8. stercorarius *Ent. Heft.* 9. neglectus *Megerlé.* 10. nov. sp. 11. carbonarius *Ent. Heft.* 12. nov. sp. 13. purpurascens *Fabr.* bipustulatus *Marsh.* β . brunneus *Marsh.*

B. *Elytra striis externis abbreviatis.*

1. virescens *Payk.* 2. nov. sp. 3. æneus *Fabr.* 4. nov. sp. 5. nov. sp. 6. nov. sp. 7. speculifer *Latr.* 8. nitidulus *Fabr.* semipunctatus *Marsh.*

Gen. IV. DENDROPHILUS.

Corpus impunctatum.

Histeres: 1. punctatus *Ent. Heft.* 2. nov. sp.

Gen. V. PLATYSOMA.

*** *Elytra striis nullis. Corpus punctatissimum.***

Histeres: 1. picipes *Fabr.* 2. nov. sp.

**** *Elytra striis nonnullis externis. Corpus punctatissimum.***

3. flavicornis *Herbst.*

***** *Elytra externe striata. Corpus impunctatum.***

1. depressus *Marsh.* 2. oblongus *Fabr.*

Gen. VI. HOLOLEPTA.

HOLOLEPTA. *Paykull.*

Hololepta humilis. Payk. Monog. Hist. 109. t. 13. f. 3.

XXII. *On the Stirpes and Genera composing the Family Pselaphidea; with the Names of the British Species.*

PSELAPHIDEA.

DIMERA. *Latreille.*

PSELAPHUS. *Herbst. &c.*

CHARACTER.

Insecta coleoptera, elytris abbreviatis, tarsis triarticulatis, unguibus monodactylis.

SYNOPSIS STIRPIUM ET GENERUM.

I. *Antennæ 11-articulatæ. Palpi maxillares elongati.*

Stirps 1. Corpus elongatum depressum.

Genera.

Antennæ articulis 1 et 2 crassioribus.

Palpi maxillares articulo ultimo conico - - -

1. EUPLECTUS.

*Stirps 2 *. Corpus breve convexum.*

A. *Palpi maxillares articulo ultimo securiformi.*

Antennæ articulo secundo primo crassiore - - -

2. BYTHINUS.

Antennæ articulo secundo primo tenuiore: articulo quinto articulis quarto et sexto non crassiore. - - -

3. ARCOPAGUS.

* Hujus Stirpis sectionem alteram (D.) forte efformat genus CRENISTES *Reich. Monog. Psel. 75.* “*Palpi maxillares articulis 3 et 4 oblongis, transversim impositis, extus acuminatis, seta terminali.*”

Genera.

Antennæ articulo secundo primo tenuiore: articulo quinto articulis quarto et sexto crassiore - - - - 4. TYCHUS.

B. *Palpi maxillares articulo ultimo conico.*

Antennæ articulis 1 et 2 crassioribus cylindraceis - - - 5. BRYAXIS.

C. *Palpi maxillares articulo ultimo clavato.*

Antennæ articulis 1 et 2 elongatis subcylindraceis - - - 6. PSELAPHUS.

II. *Antennæ 6-articulatæ. Palpi maxillares brevissimi.*

Stirps 3. *Corpus* subcylindraceum.

Antennæ articulis 1 et 2 minoribus subglobosis. *Palpi maxillares* filiformes - - - 7. CLAVIGER.

Latreille supposed that these animals had but two joints in their tarsi, and therefore placed them in a peculiar section of the Coleoptera; observing, however, that they are allied to *Aleochara*, a genus of the family *Staphylinidea*, to which family they are even referred by Kirby.

I consider them as constituting a distinct family, whose situation is intermediate between the *Staphylinidea* and *Scydmaenidea*, to both of which they are intimately allied, but may be distinguished from either by the structure of their claws, and from the latter also by their abbreviated elytra.

The genus *Cleunium* of Latreille I have never seen;

but suspect that it will be found to constitute a family intermediate between *Pselaphidea* and *Scydmaenidea*.

Of this family my cabinet contains nineteen British species, five of which are new, and none of them were known to Mr. Marsham, who has not described one species in his *Entomologia Britannica*.

Stirps 1. *

Gen. 1. EUPLECTUS.

EUPLECTUS. *Kirby Mss.*

Sp. 1. *Euplectus Reichenbachii*.

Pselaphus nanus, *Reich. Monog. Pselaph.* 69. t. 2. f. 20.

Habitat in com. *Norfolciæ* rarissime. Communicavit Dom. J. Curtis.

I possess two new species of this genus; but I shall refrain from describing them until I have seen the species mentioned in the note beneath, and which I hope to obtain from my liberal correspondent Mr. Kunzé of Leipsic, to whom I feel much indebted for several species of this interesting family of Coleoptera.

Stirps 2.

Gen. II. BYTHINUS.

PSELAPHI FAM. II. *Reichenbach*, pars.

Antennæ articulo 1 crasso cylindraceo; 2 crassiore, MARIS interne acute producto; articulis 3, 4, 5, 6, 7 et 8 æqualibus lenticulatis; 9 et 10 crassioribus lenticulatis; 11 ovato, apice acutissimo.

* Ad hanc stirpem saltem forte pertinent PSELAPHI Reich. 1. *ambiguus*. 2. *Karstenii*. 3. *signatus*.

Palpi maxillares articulo 1 filiformi, apice gradatim clavato; 2 ovato; 3 ovato securiformi maximo basi angustissimo.

Sp. 1. *Bythinus securiger*.

Pselaphus securiger. Reich. Monog. Psel. 45.

Habitat in com. Norfolciæ. Jos. Hooker.

Sp. 2. *Bythinus Curtisii*.

B. saturate badius aut fusco-badius, ore antennis pedibusque rufo-castaneis, thorace capite latiore, elytris punctatis.

Habitat in Norfolcia; sub nomine *Pselaphi binodis* communicavit Dom. J. Curtis. Apud Bexley, prope Londinum ♂ observavit Dom. G. Samouelle, qui mihi communicavit.

Gen. III. ARCOPAGUS.

PSELAPHI FAM. II. Reich. pars.

Antennæ articulis 1 et 2 crassioribus: articulo 1 elongato; 2 subgloboso primo tenuiore; articulis 3, 4, 5, 6, 7 et 8 æqualibus subglobosis; 9 crassiore lenticulari - subgloboso; 10 lenticulari - subgloboso præcedente majore; 11 aliis crassiore ovato apice acuminato.

Palpi maxillares articulo 1 filiformi apice gradatim clavato; 2 elongato-ovato; 3 ovato-securiformi basi angustissimo.

* *Antennæ articulo primo cylindraceo.*

Sp. 1. *Arcopagus glabricollis*.

Pselaphus glabricollis. Reich. Monog. Pselaph. 43. t. 1. f. 8.

Habitat in sylvis sub muscis. Prope Londinum rarissime.
Dom. G. B. Sowerby; prope Bristol haud infrequens.
Dom. J. Miller.

Sp. 2. *Arcopagus clavicornis*.

Pselaphus clavicornis. Reich. Monog. *Pselaph.* 40. t. 1.
f. 7.

Habitat prope Swansea rarius. Dom. S. W. Millard.

** *Antennæ articulo primo interne dilatato.*

Sp. 3. *Arcopagus bulbifer*.

Pselaphus bulbifer. Reich. Monog. *Pselaph.* 37. t. 1. f. 6.

Habitat in com. Norfolciæ. Dom. Sims et Jos. Hooker.

Gen. IV. TYCHUS.

PSELAPHI FAM. II. Reich. pars.

Antennæ articulis 1 et 2 crassioribus subcylindraceis: articulo 1 longiore crassiore; articulis 3, 4, 5, 6, 7 et 8 subglobosis: 1, 3 et 4 paulo longioribus: 5 (MARIS præsertim) crassiore; 9 et 10 globoso-lenticulatis crassioribus; 10 majore; 11 ovato aliis crassiore.

Palpi nondum sedulose examinavi.

Sp. 1. *Tychus niger*.

Pselaphus niger. Reich. Monog. *Pselaph.* 35. t. 1. f. 5. ♂
a ♀ antenna.

Habitat prope Londinum, Bristol, et in com. Norfolciæ, haud valde infrequens. Var. elytris disco castaneis mihi communicavit Dom. J. Miller.

Gen. V. BRYAXIS †.

BRYAXIS. *Knoch.*PSELAPHI FAM. III. A. *Reich.*

Antennæ articulis 1 et 2 crassioribus subcylindraceis ; articulis 3, 4, 5, 6 et 7 subcylindraceis : 5 longiore ; 8 subgloboso minore ; 9, 10 et 11 aliis crassioribus.

Palpi maxillares articulo 1 clavato basi angustissimo ; 2 subgloboso ; 3 conico.

* *Thorax foveolis sulco conjunctis. Antennæ articulo ultimo apice acuto ; articulis 3, 4, 5, 6 et 7 elongatis.*

Sp. 1. *Bryaxis longicornis.*

B. antennis articulis 9, 10 et 11 elongatis clavam gradatim efformantibus ; hoc apice acuminato.

Habitat in agris Battersea dictis prope Londinum, inter graminum radices.

Sp. 2. *Bryaxis sanguinea.*

B. antennis articulo 9 ovato ; 10 crassiore subgloboso basi paulo angustiore ; 11 elongato-acuminato.

Pselaphus sanguineus. Reich. Monog. Psel. 49.

Habitat in Norfolcia, et in agris Battersea dictis prope Londinum.

** *Thorax foveolis distinctis. Antennæ articulo ultimo apice subobtusato ; articulis 3, 4, 5, 6 et 7 brevibus. (articulo 9 subgloboso ; 10 lenticulari.)*

† Ad hoc genus *Pselaphus insignis Reich.*, quem a Dom. Kunzé accepi, pertinet.

Sp. 3. *Bryaxis impressa*.

Pselaphus impressus. Reich. Monog. *Pselaph*. 58. t. 2.
f. 15.

Habitat in com. Norfolciæ. J. Hooker. S. Wilkin.

Sp. 4. *Bryaxis fossulata*.

Pselaphus fossulatus. Reich. Monog. *Pselaph*. 54. t. 2.
f. 15.

Habitat prope Londinum, Copenhagen Fields, et prope
Bexley. Dom. Samouelle.

Sp. 5. *Bryaxis hæmatica*.

Pselaphus hæmaticus. Reich. Monog. *Pselaph*. 52. t. 2.
f. 12.

Habitat sub muscis. In Danmoniæ sylvis prope Ashbur-
ton haud rarius occurrit.

Sp. 6. *Bryaxis Juncorum*.

B. rufescente-castanea cinereo-pubescens, pedibus anten-
nisque dilutioribus, thorace subgibboso; foveolis latera-
libus majoribus; postica minima.

Habitat in juncis. In Norfolcia, Danmonia, et prope
Londinum observavi.

Minor *B. hæmatica*.

Gen. VI. PSELAPHUS.

PSELAPHUS. Herbst, Latr., Leach, &c.

PSELAPHI FAM. I. Reichenbach.

Antennæ articulis 1 et 2 elongatis subcylindraceis; articulis
3, 4, 5, 6, 7 et 8 subglobosis æqualibus; 9 et 10
crassioribus fere æqualibus subglobosis; 11 elon-
gato-ovato aliis crassiore.

Palpi maxillares articulo 1 filiformi apice subabrupte clavato ; 2 subgloboso ; 3 filiformi apice gradatim clavato.

Sp. 1. *Pselaphus Herbstii*.

Pselaphus Herbstii. Reich. Monog. Psel. 25. t. 1. f. 1.

Habitat in ripam prope Bristol vulgatissime. Croydon et Godstone prope Londinum semel legi.

Sp. 2. *Pselaphus Hiesii*.

Pselaphus Hiesii. Reich. Monog. Pselaph. 28. t. 1. f. 2.

Habitat in Norfolcia. Dom. J. Curtis et Jos. Hooker.

Sp. 3. *Pselaphus longicollis*.

Pselaphus longicollis. Reich. Monog. Pselaph. 30. t. 1. f. 3.

Habitat in Norfolcia et Danmonia rarissime.

Sp. 4. *Pselaphus Dresdensis*.

Pselaphus Dresdensis. Reich. Monog. Pselaph. 32. t. 1. f. 4.

Prope Bristol semel observavit Dom. J. Miller, qui mihi communicavit. Ex Austria, sub nomine *P. gibboscicollis Knoch*. a Megerle accepi.

Species omnes novas et sequentes in Monographia Domini Reichenbach accuratissime descriptas, ab entomologis peto. 1. *Dresdensis* ♂. 2. *bulbifer* ♀. 3. *securiger* ♀. 4. *brevicornis* ♂ et ♀. 5. *insignis* ♂. 6. *sulcicollis* ♂ et ♀. 7. *venustus* ♂ et ♀. 8. *ambiguus* et ♀. 9. *nanus* ♀. 10. *Karstenii* ♂ et ♀. 11. *signatus* ♂ et ♀. —necnon genera CLAVIGER et CHENNIUM, Latr.

XXIII. *Sketch of the Characters of the Genera
of Parnidea, a Family of Coleoptera.*

PARNIDEA.

PARNUS. *Fabr., Illig.*

DRYOPS. *Oliv., Lam., Latr.*

Corpus subcylindraceum convexum marginatum. *Elytra*
integra.

Antennæ tripartitæ : parte ultima articulata.

Tarsi 5-articulati elongati.

Stirps 1. *Antennæ* sub oculis in fossula receptæ ; articulo
primo conico brevi ; secundo cochleariformi-
trigono ; articulis aliis clavam semiovaalem ef-
formantibus. *Thorax* antice vix angustior :
Sternum antice dilatatum.

Genera.

Antennæ clava subserrata : dentibus ob-
tusis. *Thorax* utrinque linea
longitudinali impressa. *Pedes*
mediocres : antici et medii lon-
gitudine fere æquales - - 1. PARNUS.

Antennæ clava subpectinata : dentibus
acutis. *Thorax* lineis impressis
nullis. *Pedes* elongati : antici
mediis longiores - - 2. DRYOPS.

Stirps 2. *Antennæ* liberæ ; articulo primo
elongato filiformi curvo ; se-
cundo brevissimo subglo-
boso ; articulis aliis clavum

Genera.

datim efformantibus. Tho-
rax antice angustior. Ster-
num antice non dilatatum.

Thorax lineis nullis impressis - 3. POTAMOPHILUS.

Gen. I. PARNUS.

Parnus auriculatus, cum speciebus plurimis adhuc exami-
nandis, ad hoc genus pertinet.

Gen. II. DRYOPS.

Sp. 1. *Dryops Dumerilii*.

Dryops Dumerilii. *Latr. Gen. Crust. et Ins.* 2. 56.

Habitat in Hispania, Italia. Communicavit Cl. Bonelli.

Gen. III. POTAMOPHILUS.

POTAMOPHILUS. *Germar**,

HYDERA. *Latreille*.

Sp. 1. *Potamophilus Germari*.

Parnus acuminatus. *Fabr. Syst. Eleut.* 1. 332.

Potamophilus acuminatus. *Germ. Mag. der Ent.* 1. 1. 64.

Hydera acuminata. *Latr. Cuv. Rég. Anim.* 3. 268.

Habitat in Germania, Gallia.

* *Magazin der Entomologie. Erster Jahrg.* (an. 1813) p. 64. Nomen
itaque genericum POTAMOPHILUS, *Latr. Cuv. Reg. Anim.* 3. 18.
(an. 1817) mutandum est.

XXIV. On the distinguishing Characters of two Families of Coleopterous Insects named Hydrophili by Latreille, with a Synopsis of the Genera composing them.

HYDROPHILII.

Familiæ.

HYDROPHILII. Latreille.

Mandibulæ ad apicem inermes. *Cor-*

pus elongatum - - - 1. HELOPHORIDEA.

Mandibulæ ad apicem bidentatæ.

Corpus ovale aut subrotundum 2. HYDROPHILIDEA.

Fam. I. HELOPHORIDEA.

SYNOPSIS STIRPIUM ET GENERUM.

Stirps 1. Clypeus integer. (Palpi maxillares articulo ultimo crassiore ovali.)

Genera.

Oculi sessiles. *Thorax* transversus] 1. HELOPHORUS.

Oculi valde prominuli. *Thorax* elongatus - - - 2. HYDROCHUS.

Stirps 2. Clypeus integer.

Palpi maxillares mediocres articulo ultimo graciliore acuto - - 3. OCHTHEBIUS.

Palpi maxillares longissimi articulo ultimo utrinque acuminato - 4. HYDRÆNA.

Gen. I. HELOPHORUS.

HELOPHORUS *. *Leach.*ELOPHORUS. *Fabr., Oliv., Latr., Gyll. &c.** *Thorax et Elytra lineis exaratis.*Elophori: 1. grandis *Illig.* - *Hydrophilus stagnalis Marsh.*2. granularis *Gyll.* 3. griseus *Gyll.* H. affinis *Marsh, &c.*** *Thorax et Elytra lineis elevatis.*Elophori: 1. nubilus *Gyll.* 2. Fennicus *Gyll.*

Gen. II. HYDROCHUS.

HYDROCHUS. *Germar.*ELOPHORUS. *Fabr., Illig., &c.*HELOPHORUS**. *Leach.*Elophori: 1. elongatus *Fabr.* H. cicindeloides *Marsh.*2. crenatus *Fabr.* 3. brevis.

Gen. III. OCHTHEBIUS.

OCHTHEBIUS. *Leach* §.ELOPHORUS. *Fabr.*HYDRÆNA. *Latreille, Illig.*Elophori: 1. riparius. H. riparia *Illig.* H. impressus*Marsh.* 2. marinus *Gyll. &c.*

Gen. IV. HYDRÆNA.

HYDRÆNA. *Kugellan, Leach.*1. Kugellani *Leach.* riparia *Kugel.* Hydr. longipalpis
Marsh, &c.

Fam. II. HYDROPHILIDEA.

Thorax transversus brevis.*Genera.*

Stirps 1. Clypeus emarginatus. Sternum simplex. *Antennæ* 6-articulatæ - - - 1. SPERCHEUS.

Stirps 2. Clypeus integer. Sternum simplex.

A. *Elytra* apice integra. *Scutellum* parvum.

Corpus antice angustius. *Thorax* subgibbosus. *Oculi* valde prominenti - - - 2. Berosus.

Corpus ovatum convexum utrinque obtusatum. *Oculi* simplices 3. HYDROBIUS.

B. *Elytra* apice truncata. *Scutellum* latum.

Corpus subdepressum. *Oculi* simplices 4. LIMNEBIUS.

Stirps 3. Clypeus integer. Sternum spiniforme, medio latius, postice acuminatum. *Antennæ* articulo ultimo acuminato - - - 5. HYDRÖUS.

Corpus postice latius obtusum. *Antennæ* articulo ultimo obtuso 6. HYDROPHILUS.

SYNONYMA GENERUM.

Gen. I. SPERCHEUS.

SPERCHEUS. *Fabr., Latr., &c.*Sp. 1. *Spercheus sordidus.**Spercheus emarginatus. Fabr., &c.**Hydrophilus sordidus. Marsh Ent. Brit. 1. 403.*

Habitat in aquis stagnantibus Europæ "inter radices plantarum," *Gyll.* In Anglia rarissime occurrit. Prope York lexit Dom. W. Daniell. Elytra in Horto Kensington semel observavi.

Hydrophilus verrucosus Marsh. forte varietas?

Gen. II. BEROSUS.

1. *Hydrophilus luridus auctorum.*

Gen. III. HYDROBIUS.

HYDROBIUS. *Leach ||.** *Elytra striata.**Hydrophilus: 1. Fuscipes, &c.*** *Elytra lævia.**Hydrophili: 1. melanocephalus, 2. orbicularis, &c.*

Gen. IV. LIMNEBIUS.

LIMNEBIUS. *Leach ||.**Hydrophilus: 1. nitidus Marsh. truncatellus Fabr.*|| *Edinb. Encycl. 9. 96.*

Gen. V. HYDRÖUS.

HYDRÖUS. *Linné Mss., Leach.*

Scutellum magnum. *Tarsi antici* ♂ medium versus valde dilatati, unguibus inæqualibus.

Hydrophilus: 1. piceus, &c.

Gen. VI. HYDROPHILUS.

Scutellum mediocre. *Tarsi antici* in utroque sexu simplices.

Hydrophilus 1. Caraboides, cum speciebus nonnullis ineditis.

XXV. *Synopsis of the Genera composing the
Family Sphærididea*.*

SPHÆRIDIDEA.

SPHÆRIDIDIUM *auctorum*.

SPHÆRIDIOTA. *Latreille, Gyllenhall.*

SYNOPSIS GENERUM.

Genera.

- Antennæ* clava solida. *Tarsi* *antici* ♂
articulo ultimo magno; un-
gue interno valde incurvato 1. SPHÆRIDIDIUM.
Antennæ clava laxè imbricata. *Tarsi*
antici in utroque sexu sim-
plices - - - - 2. CERCYON.

SYNONYMA GENERUM.

Gen. I. SPHÆRIDIDIUM.

Sphæridia auctorum: 1. *scarabæoides*, 2. *marginatum* &c.

Gen. II. CERCYON.

Sphæridia auctorum: 1. *unipunctatum*, 2. *melanocephalum* &c.

* *Familiaë Hydrophilideorum valde affinis.*

XXVI. *On the distinctive Characters of two Species of the Fabrician Genus Geotrupes, which have been confounded under the name of Actæon.*

Volumes might be written on the characters that divide the numerous genera named *Melolontha*, *Geotrupes*, and *Copris*, by authors, and entomologists may expect some valuable observations on this subject from the pens of A. MacLeay, Esq. and of his son W. MacLeay, Esq. both of whom have turned their attention particularly to the examination of them.

I am a warm advocate for generic divisions, (founded on the consideration of every character,) being fully satisfied that such exist in nature, and, when distinguished with judgment, tend materially to the advancement of science. Those entomologists of the Linnean school, who, by dilating the characters either of their genera or species so as to make them admit of almost any thing*, bend Nature to the artificial system of their master, would do well to consider whether they do not show greater veneration for it, than for Nature, and not to upbraid those who hold a different opinion from themselves.

Every entomologist, who has turned his attention to the study of exotic Coleoptera, knows that the female of *G. Actæon* of Fabricius is described as having crenate or irregularly sculptured elytra, and a bidentate clypeus. The latter

* For an example of this, see the altered character of the genus *Limax*, in the Introduction to Montagu's *Testacea Britannica*.

character is common to all the females of the same group with *Actæon*, and the former character is most probably as universal *.

Having once seen a female variety of *Actæon* with smooth elytra, I was induced to suppose that there were probably two species that had been confounded under that name; and soon after observing a male with crenated elytra, this opinion was strengthened.

When I mentioned my suspicions on the subject to Mr. MacLeay, he assured me that he had seen similar varieties of the male; and that on examining a sufficient number of specimens, I should be convinced that they were but varieties of one species: I did so; and was nearly induced to adopt the opinion of this excellent entomologist, when I discovered sufficient characters to distinguish them from each other.

Before pointing out the marks by which these species are distinguished from each other, it may not be improper to mention the most striking characters of the group to which they belong.

Clypeus utrinque antice unidentatus. *Vertex* tuberculatus aut cornutus. *Mandibulæ* valde prominulæ externe valide bidentatæ; dentibus longitudine æqualibus in his, inæqualibus in illis; exteriore in omnibus crassiore.

* The female *Dytici* have their elytra deeply sulcated, but they sometimes occur with the sulci nearly obsolete. Nine years since I found this variety, and having discovered the Linnæan error with regard to the sexes of *D. marginalis*, which he described as species, was very much perplexed. The same variety was observed by Kirby, who regarded it as a neuter; and by Gyllenhal, who rather suspected it to be a male. Bonelli, however, lately sent me a similar variety from Piedmont, saying that he had met with three specimens, which on dissection proved to be females.

MAS capite supra clypeum in cornu elongatum apice bifidum producto : cornu pone medium superne tuberculo aut dente antrorsum spectante instructo. Ejusdem thorax medio gibboso-productus, unituberculatus, aut cornu antrorsum spectante instructus : lateribus utrinque antice productis ; laciniis sæpius interne aut externe (rarius antrorsum recte) spectantibus.

Sp. 1. *Geotrupes Actæon*.

G. pedibus lævigatis obscure punctulatis ; tibiis anticis subtus punctatis, prope apicem 2- aut 3-denticulatis, externe valide tridentatis, interne apice valide unidentatis ; dente cum calcario manum didactylum efformante : (♂ elytris thoraceque lævigatis : ♀ thorace et elytris rugulosis, his prope suturam crenatis.)

Scarabæus Actæon. *Linn.*, &c.

Geotrupes Actæon. *Fabr.*, *Schönh.*

Habitat in America meridionali.

♂ Elytris prope suturam antice subcrenulatis. Variat thorace tuberculo gibbo vel producto.

Sp. 2. *Geotrupes crenatus*.

TAB. 147. ♂ et ♀.

G. pedibus punctatissimis ; tibiis anticis compressis latis subtus ruguloso-punctatis edentulis, externe valide tridentatis, apice interne acuto at non producto. (elytris in utroque sexu rugulosis prope suturam antice crenatis, margine punctulato : ♀ thorace ruguloso.)

Habitat

Mus Brit. ♂ et ♀.



Stag Beetle (Cynipidae) by R. H. Whittaker, Toronto, 1900.

XXVII. Synopsis of three of the Genera of the Order Dermaptera.

Mr. Kirby and myself about the same time perceived the characters which distinguished this as a peculiar Order, to which he proposed to give the name Dermaptera *. Amongst the British species we have three genera, which may readily be distinguished by the number of joints in their antennæ, as well as by the characters of the *instrumenta cibaria*, &c.

SYNOPSIS GENERUM.

Genera.

Antennæ articulis	{	14	- - -	1. FORFICULA.
		30	- - -	2. LABIDURA.
		12	- - -	3. LABIA.

SYNONYMA GENERUM.

Gen. I. FORFICULA.

Forficula auricularia auctorum. ♀ *F. neglecta Marsh.*

Gen. II. LABIDURA.

Forficula gigantea. Fabr.

Labidura gigantea. Leach Edinb. Encycl. 9. 118.

— *Encycl. Brit. Suppl. 1. pl. 24.*

Gen. III. LABIA.

Forficula minor auctorum. ♂ *F. media Marsh.*

Labia minor. Leach Edinb. Encycl. 9. 118.

* Trans. Linn. Soc. xi. p. 87 (note).

XXVIII. *On the external Characters of the Stirpes and Genera of the Family Tenthredinidea, with Descriptions of several new Species.*

TENTHREDINIDEA.

TENTHREDO. *Linné.*

TENTHREDINETÆ. *Latreille.*

The object of this paper is to give the external characters of the Genera of this family, to enable the student to distinguish them without examining the parts of the mouth.

Entomologists are indebted to Fabricius, Latreille, and Jurine, for the observations by which the Genera have been established; and to Klug for the determination of the Species, on which he has published a series of excellent monographs in the Berlin Magazine.

Latreille's Genera CEPHUS* and XIPHYDRIA†, which he has placed in the second division of this family, I have removed from it. Their oviduct is exserted and elongated, and they altogether want the suckers‡ beneath each joint of the tarsus, a character belonging to every genus of the *Tenthredinidea*. Their *instrumenta cibaria* too are very different.

I am not certain as to the natural position of the Stirpes in the following Synopsis.

* ASTATUS *Klug.* TRACHELUS *Jurine.*

† HYBNOTUS *Klug.*

‡ A character to which my attention was directed by Sir J. Banks.

SYNOPSIS STIRPIUM.

Stirps 1. Antennæ breves clavatæ : articulo 3 longissimo.

Areolæ 3 submarginales, 2 marginales.

Stirps 2. Antennæ brevissimæ clavatæ. Areolæ 4 sub-

marginales, 1 marginalis. Thorax angulis

anticis squama instructus. Scutellum magnum

subquadratum, postice utrinque processu den-

tiformi instructum.

Stirps 3 *. Antennæ mediocres multiarticulatæ : MARIS

subtus simplici serie pectinatæ, FEMINÆ gra-

datim extrorsum crassiores, articulis submoni-

liformibus. Areolæ 3 submarginales, 1 mar-

ginalis. Thorax angulis anticis squama in-

structus. Scutellum mediocre postice rotun-

datum inerme.

Stirps 4. Antennæ mediocres multiarticulatæ : MARIS

subtus duplici serie pectinatæ, FEMINÆ me-

dium versus crassiores intus subserratæ apice

acuminatæ. Areolæ 4 marginales : prima in-

choata, marginalis unica.

Stirps 5. Antennæ mediocres 3-articulatæ, filiformes aut

extrorsum crassiores. (MARIS ciliatæ aut fur-

catae.) Areolæ 4 submarginales, 1 marginalis.

Corpus breve crassum.

* Generis (Stirpem peculiarem forte efformantis) marem in museo MacLeay observavi. Antennæ mediocres 18-articulatæ; articulis 2 primis brevissimis, 3 longiore et cum sequentibus 14, turbinatis apice interne acute productis, articulo 18 aut ultimo externe strangu- lato. Thorax angulis anticis squama instructus. Habitat in Australia.

Stirps 6. Antennæ breves 9- aut 10-articulatæ, medio crassiores apice acuminatæ, articulo 3 quarto longiore. Corpus breve crassum.

Stirps 7. Antennæ 9-articulatæ mediocres aut elongatæ. Corpus mediocre aut elongatum. Areolæ 2 marginales.

Stirps 8. Antennæ 9-articulatæ mediocres aut elongatæ. Corpus breve. Areola 1 marginalis.

Stirps 9. Antennæ multiarticulatæ mediocres aut elongatæ. Corpus mediocre depressum. Areolæ 2 marginales, 4 submarginales.

Stirps 1.

CIMBEX *auctorum.*

SYNOPSIS GENERUM.

Calcaria albida
imposita
A. *Calcarii obtusi apice antlio instructi. Tarsi articulo penultimo antepenultimo subbreviore.*

Genera.

Antennæ articulis ante clavam	5: clava subsolida	} 2-articulata - 1. CIMBEX.
	4: clava distincte articulata	} 3-articulata - 2. TRICHIOSOMA.
		1-articulata - 3. CLAVELLARIA.
		2-articulata - 4. ZARÆA.
		3-articulata - 5. ABIA.

a *a*
B. *Calcarii acuminati simplices. Tarsi articulo penultimo antepenultimo multo brevior.*

Antennæ articulis 4 ante clavam: clava 1-articulata - - - - 6. AMASIS.

SYNONYMA GENERUM ET SYNOPSIS SPECIERUM.

Gen. I. CIMBEX.

CIMBEX. *Fabr., Latr., &c.*

Corpus obscure villosum. *Abdomen* articulo primo (maris præsertim) supra fortiter emarginato. *Femora* 4 postica inermia (MARIS valde incrassata). (*Tarsi* 4 postici MARIS articulo ultimo apice inferne corniculato.)

Sp. 1. *Cimbex fuscipennis.*

C. obscura, tarsis antennisque luteis, alis infuscatis.

Long. corp. $7\frac{1}{4}$; expans. alar. 25 lin.

Habitat

Mus. Dom. MacLeay ♂.

Politus. Caput et thorax nigri. Antennæ articulis tribus primis subfuscescentibus. Pedes cyaneo-violascente-nigri: tibiis obscurioribus: tarsis luteis; articulo primo subfuscescente. Abdomen violascente-nigricans, lateribus postice et ventre violascente-luteo-fuscis; segmento primo membrana lutescente.

Sp. 2. *Cimbex MacLeayi.*

C. pallide-violascente-nigricans, antennis tarsis abdomine-que (basi dorsali excepto) luteis, alis hyalinis; apice areolaque secunda costali basi fuscescentibus.

Long. corp. $13\frac{1}{2}$; exp. alar. 27 lin.

Habitat in insula St. Domingo.

Mus. MacLeay ♂.

Antennæ articulis quatuor primis pallide subfuscescentibus.

Abdomen articulo primo membrana lutea.

Sp. 3. *Cimbex Americana*.

C. capite thoraceque nigris, abdomine intense violaceo: ventre fusco-nigro, antennis tarsisque luteis, femoribus tibiisque intense cyaneis, alis hyalinis: apice areolae secundae costali antice fuscescentibus.

Long. corp. $13\frac{1}{2}$; expans. alar. $25\frac{1}{2}$ lin.

Habitat in America Georgia.

Mus. Francillon, Nost. ♂.

Affinis certe *C. femoratae*. Antennae articulis duobus primis pernigris; articulo tertio basi praesertim subfuscescente, articulis quarto et quinto saturate luteo pallide subfuscescentibus. Tarsi (quatuor postici praesertim) articulo primo subtus et corniculo subferrugineis. Abdomen basi membrana lutea.

Sp. 4. *Cimbex Europaea*.

C. capite thoraceque nigricante-atris, abdomine violascente-atro: ventre medio saltem lutescente aut ferrugineo, antennis tarsisque luteis, femoribus tibiisque cyaneo-violascente-atris, alis hyalinis apice areolae costali secundae antice fuscescentibus.

Tenthredo femorata. Linn. Fn. Sv. 1533.

Panz. Fn. Ins. Germ. 26. 20 ♂.

Cimbex femorata. Fabr. Syst. Piezat. 1.

Latr. Hist. Nat. des Cr. et Ins. 13. 119.

Crabro lunulatus. Fourc. Ent. Paris. 362.

Long. corp. 11—13; exp. alar. 21— $23\frac{1}{4}$ lin.

Habitat in Europa. In Anglia prope Dartford et Windsor rarius.

Antennæ luteæ, articulis duobus primis saturatoribus, fuscis aut nigris; clava semper dilutiore. Tarsi articulo primo concolore aut subtus fuscescente; corniculo ferrugineo, fuscescente aut concolore. Abdomen basi membrana lutea.

Variat tibiis, aut tibiis femoribus coxisque brunneis, subfuscis aut subferrugineis, violaceo-subcoloratis: et abdomine lateribus medio ferrugineis, ventre ferrugineo brunneo aut lutescente.

Sp. 5. *Cimber varians*.

C. nigra, antennis tarsis membranaque abdominali luteis, alis hyalinis; apice areolaque submarginali secunda fuscis.

Long. corp. $7\frac{1}{4}$ — $11\frac{1}{2}$; exp. alar. 16—20 lin.

Habitat in sylvis Combe et Darent prope Londinum.

Colore valde variat. Abdomen sæpius nigrum, variat segmentis 3—6 aut 4—6 lateribus luteis, aut luteo maculatis. Tibiæ nunc nigræ, nunc luteæ aut pallide fusæ. Alæ apice sæpius perfusæ, nonnunquam subfuscescentes. Ungues rarius subferruginei.

Marem (varietatem forte) semel observavi, abdomine lateribus ventreque ferrugineis.

Sp. 6. *Cimber Klugii*.

C. violascente-nigra, capite thoraceque nigris, antennis tarsis abdomineque dorso fasciis quinque flavis; duabus primis et ultima interruptis, alis hyalinis; apice areolaque costali secunda antice subfusca.

Long. corp. $13\frac{1}{2}$: exp. alar. 25 unc.

Habitat in insula St. Domingo.

Mus. MacLeay ♀.

Sequenti valde affinis.

Sp. 7. *Cimbex decem-maculata*.

C. violascente-nigra, capite thorace ventreque nigris, antennis tarsis et membrana abdominali luteis, abdomine segmentis 3, 4, 5, 6, et 7, utrinque macula flava, alis hyalinis subfulvescentibus, apice areolae costali secunda saturatioribus.

β. Ano subtus flavo.

Long. corp. 10—11 ; exp. alar. $21-23\frac{1}{2}$ lin.

Habitat in Anglia apud Windsor rarissime. (β. in Gallia?)

Mus. nost. ♀ et β.

An *Tenthredo lutea* *Linn. Fn. Sv.* 1534 ? — Abdominis maculae duae anticae et posticae parvae, sex intermediae majores aequales.

Sp. 8. *Cimbex maculata*.

C. violascente-nigra, capite antennis tibiis tarsisque sordide testaceis aut luteis, thorace fuscescente-subvioletta; pectore atro, abdomine supra anoque subtus flavis; segmentis tribus primis dorsalibus violascente-nigris; tertio macula utrinque flava; quarto macula dorsali violascente-nigra.

Le Frelon à échancrure et ventre jaune. *Geoff. Ins.* 2. 263.

Crabro maculatus. *Fourc. Ent. Paris.* 361.

Tenthredo montana. *Panz. Fn. Ins. Germ.* 84. 12.

Cimbex montana. *Latr. Hist. Nat. des Cr. et Ins.* 13. 122.

Long. corp. 10—12 $\frac{1}{2}$; exp. alar. 21—24 lin.

Habitat in Germania, Gallia (et Anglia in sylva Darent prope Dartford).

Membrana abdominalis concolor.

Marem nunquam observavi.

Sp. 9. *Cimbex annulata*.

C. lutea, abdomine flavo, thorace disco pectore abdominisque segmentis duobus primis tertioque macula subviolascente-fuscis, femoribus violascente-luteis, alis subfulvescentibus, areola secunda costali saturatiore, apice pallide fuscescentibus.

Crabro annulatus. *Fourc. Ent. Paris.* 362.

Cimbex lutea. Panz. Fn. Ins. Germ. 105. 14??

Habitat in Anglia rarissime. Prope Windsor semel obvia.

Abdomen segmentis dorsalibus (tribus primis exceptis) macula ferruginea medio notatis.

Sp. 10. *Cimbex Griffinii*.

C. lutea, pectore saturatiore, abdomine flavo segmentorum interstitiis nigris, alis subfulvescentibus, areola secunda costali saturatiore.

Long. corp. 11; exp. alar. 21 $\frac{1}{2}$ lin.

Habitat in Anglia; prope Norwich ♀ semel a Dom. M. Griffin lecta, et ab illo mihi benevole missa.

Mus. nost.

Præcedenti affinis, at satis esse distincta videtur. Abdomen segmentis superne macula ferruginea notatis. Alæ apice obscurissime saturatiore.

Sp. 11. *Cimbex humeralis*.

C. nigra, antennis pedibusque luteis, fronte thoracis angulis anticis abdomineque flavis ; hoc superne segmentis 1, 2, et 4, fuscis, externe macula flava notatis, aliis medio macula fusca, alis hyalinis antice fulvescentibus fusco-variis.

Le Frelon à épaulettes. *Geoff. Hist. des Ins.* 2. 262.

Crabro humeralis. *Fourc. Ent. Paris.* 361.

Tenthredo connata. *Schr. Enum. Ins. Aust.* 648.

Tenthredo axillaris. *Panz. Fn. Ins. Germ.* 84. 11. ♂.

Cimbex axillaris. *Latr. Hist. Nat. des Cr. et Ins.* 13. 122.

Tenthredo axillaris. *Jur. Hymenop. pl.* 6. ♀.

Long. corp. $9\frac{1}{4}$; exp. alar. $17\frac{1}{2}$ lin.

Habitat in Gallia, Germania (et Anglia rarissime, prope Salisbury bis obvia).

Caput scutellum et pleura luteo-ferruginea. Femora quatuor postica antice nigra. Mandibulæ ferrugineæ.

Gen. II. TRICHIOSOMA.

Corpus villosum. *Abdomen* articulo primo supra (MARIS præsertim) tenuiter emarginato. *Femora* 4 postica dentata (MARIS incrassata).

Sp. 1. *Trichiosoma sylvaticum*.

Tr. subæneo-atrum, abdomine nigro-æneo ; ventre sordide luteo fusco marginato, femoribus cyaneo-atris, tibiis tarsisque luteis, alis subfulvescentibus apice fuscis.

β. Alis apice extremo obscurissime subfuscescentibus.

γ. Thorace nigro-æneo, abdomine lateribus ventreque rufescenti-luteis.

Long. corp. 8 ; exp. alar. 18 lin.

Habitat in sylvis prope Londinum rarissime.

Mus. Stephens ♀ α . *nost.* ♀ α , β , γ .—Mas latet.

Villi corporis cinerascens. Antennæ articulis duobus ultimis ante clavam sæpius rufescentibus. Mandibulæ apice rufæ; dextra dentibus obsoletis. Labrum mediocre, longius quam latum distincte pentagonum, angulis lateralibus et apicali vix rotundatis.

Sp. 2. *Trichiosoma laterale*.

Tr. nigro-æneum, capite saturatiore, antennis nigris, femoribus cyaneo-atris, tibiis tarsis ventre lateribusque abdominis luteis, alis subfulvescentibus apice fuscis.

Long. corp. 12 ; exp. alar. 22 lin.

Mus. nost. ♂.

Habitat in sylvis Londinum prope rarissime.

Marem mihi communicavit Dom. G. Samouelle, qui in sylva Darent dicta lexit.

Mandibulæ atræ apice piceæ; latere interno in utraque mandibula valide tridentato. Labrum magnum longius quam latum, angulis anticis et apicali rotundatis. Villi ferruginei.

Sp. 3. *Trichiosoma marginale*.

Tr. nigro-æneum, femoribus violascentibus, antennis, tibiis, tarsis, ventre et abdominis lateribus maculis luteis, alis subfulvescentibus apice fuscescentibus.

Long. corp. 7 ; exp. alar. 15 lin.

Mus. Britan. ♂.

Habitat

Antennæ articulis duobus primis nigris. Mandibulæ apice rufescentes. Labrum paulo latius quam longum lateribus anticis subdilatatis, apice subrotundato.

Sp. 4. *Trichiosoma Latreillii*.

Tr. æneo-nigrum, capite antennisque nigris, abdomine supra purpurascente-nigro, femoribus violascentibus, tibiis tarsisque luteis, alis subfulvescentibus apice fuscis.

Long. corp. 11 ; exp. alar. 20 lin.

Habitat in Gallia ?

Mus. nost. ♂ et ♀ . Communicavit Latreille.

Villi ferruginei. Mandibulæ apice rufo-ferrugineæ. Labrum ♂ fere rotundatum angulis anticis apiceque paululum productis. Variat antennis articulis duobus ultimis ante clavam ferrugineis.

Sp. 5. *Trichiosoma Lucorum*.

Tr. nigrum, thorace æneo-nigro, femoribus cyaneo-atris, tibiis tarsisque luteis, alis subfulvescentibus apice fuscis (labro ♂ magno).

Tenthredo Lucorum. *Linn. Fn. Sv.* 1537.

Cimbex Lucorum *auctorum*.

Long. corp. $6\frac{1}{2}$ —10 ; exp. alar. 15— $18\frac{1}{4}$ lin.

Habitat in Europa (in Anglia vulgatissime).

Mandibulæ apice rufæ aut piceo-rufæ, bidentatæ. Labrum ♂ magnum paulo longius quam latum, angulis anticis totis et apicali paulo rotundatis ; ♀ parvum. Villi ferruginei, thoracis et abdominis basi saturatiores. Antennæ variant articulis intermediis totis aut apice luteis. Venter niger, fuscus aut testaceus.

Sp. 6. *Trichiosoma Scalesii*.

Tr. æneo-nigrum, capite atro, femoribus purpureo-violascentibus, tibiis tarsisque luteis (mandibulis ♂ parvis).

Long. corp. $5\frac{1}{2}$ — $7\frac{1}{2}$; exp. alar. $12\frac{1}{2}$ —15 lin.

Mus. nost. ♂ et ♀.

Habitat in sylva Combe dixta, rarius. ♀ communicavit Dom. R. Scales.

Villi ferruginei, thoracis et abdominis basi saturatiores.

Mandibulæ bidentatæ apice rufescentes. Labrum ♂ latius quam longum angulis anticis rotundatis; apice nullo modo producto; ♀ minutum.

Sp. 7. *Trichiosoma unidentatum*.

Tr. nigrum, capite thorace, abdominisque basi ferrugineis dense villosis, femoribus violascentibus, tibiis tarsisque luteis, alis subfulvescentibus apice fuscis, mandibulis rufis unidentatis.

Long. corp. 7; exp. alar. 14 lin.

In sylva Darent prope Londinum semel obvium.

Mus. nost. ♂.

Gen. III. CLAVELLARIA.

CLAVELLARIA. Lamarck.

Corpus villosum aut obscure villosum. Abdomen articulo primo tenuiter emarginatum. Femora 4 postica inermia (MARIS incrassata).

Sp. 1. *Clavellaria Armerinæ*.

Cl. nigra cinereo-pubescent, labro albido maximo cordato; basi late truncato, antennis articulo ultimo tibiis tarsis ventre anoque rufescenti-luteis, alis hyalinis areola secunda costali apiceque fuscescentibus.

Tenthredo Armerinæ. *Linn. Fn. Sv.* 1536.

Cimbex Armerinæ *auctorum*.

Long. corp. 9; exp. alar. 15 lin.

Habitat in Europa. (In Anglia ♂ apud Windsor bis obvia.)

Corpus villosum. Abdomen segmentis duobus ultimis totis et antepenultimo apice rufescenti luteis. Mandibulæ valde elongatæ graciles.

Fœminam nondum vidi.

Sp. 2. *Clavellaria marginata*.

Cl. nigra, antennis apice tibiis tarsisque luteis, abdomine segmentis posticis margine albis, ventre fasciis et margine labroque albis.

Tenthredo marginata. *Linn. Syst. Nat.* 929.

Panz. Fn. Ins. Germ. 17. 14. ♀.

Cimbex marginata *auctorum*.

Long. corp. 8—10; exp. alar. 15—17½ lin.

Habitat in Europæ sylvis. Apud Windsor nonnunquam ♀ legit Dom. Griesbach—Mas latet.

Gen. IV. ZARÆA.

Oculi ♂ postice contingentes.

Z. atra, tibiis tarsisque luteis, alis anticis fascia fusca (abdomine ♀ basi albido). *Sp. 1. Zaræa fasciata.*

Tenthredo fasciata. *Linn. Fn. Sv.* 1538.

Panz. Faun. Ins. Germ. 17. 15.

Cimbex fasciata *auctorum.*

Long. corp. $5\frac{1}{4}$; exp. alar. 11 lin.

Habitat in Europæ sylvis. In Anglia rarior.

Abdomen maris totum nigrum.

Gen. V. ABIA.

Abdomen MARIS macula obscura sericea elongata postice notatum. Oculi ♂ postice valde approximati.

Sp. 1. *Abia nigricornis.*

A. antennis pernigris, alis fascia media maculaque apicali fuscescentibus, pedibus flavis; femoribus nigro-æneis.

Tenthredo nitens ♀. *Linn. Fn. Sv.* 1539.

Cimbex sericea var. *Fabr. Syst. Piezat.* 18.

Cimbex ænea. *Klug in litteris.*

Long. corp. $4\frac{3}{4}$ — $5\frac{1}{4}$; exp. alar. $9\frac{1}{4}$ — $10\frac{3}{4}$ lin.

Habitat in Angliæ, Galliæ sylvis. Anno 1815 observavi.

Abdomen supra æratum. Thorax ærato-ater.

Sp. 2. *Abia sericea.*

A. antennis ferrugineis, alis fascia media strigaeque apicali fuscescentibus, pedibus flavis, femoribus nigro-æneis aut purpurascentibus.

Tenthredo sericea. *Linn. Syst. Nat.* 2. 921.

Cimbex sericea auctorum.

Panz. Fn. Ins. Germ. 17. 16. ♂ 17. ♀.

Habitat in Europæ sylvis.

Magnitudo præcedentis. Abdominis dorsum viridi-æneum.

Thorax æneo-niger, lateribus sæpe viridi nitentibus.

Sp. 3. *Abia brevicornis.*

A. antennis brevibus femoribusque ferrugineis, alis linea transversa medio maculaque obscura apice subfuscescentibus, tibiis tarsisque flavis.

Magnitudo omnino præcedentium. Antennæ breviores.

Corpus subtus æneum purpureo viridi et cœruleo nitens.

Caput et thorax viridi-ænei. Abdominis dorsum viridinitens.

Gen. VI. AMASIS.

Corpus nudum punctatum. *Abdomen* articulo primo integro.

Sp. 1. *Amasis obscura.*

A. nigra.

Tenthredo obscura. Fab. Ent. Syst. 2. 107.

Panz. Fn. Ins. Germ. 84. 13.

Cimbex obscura auctorum.

Habitat in Sueciæ, Germaniæ nemoribus rarius. Apud Messinam observavit Dom. Swainson, qui mihi communicavit.

Sp. 2. *Amasis læta.*

A. nigra, abdominis dorso subcroceo, segmento primo toto segmentisque alis basi nigris, pedibus flavis; femoribus basi tibiis posticis apice tarsisque omnibus apice nigris,

Tenthredo læta. *Fab. Ent. Syst. Suppl.* 214.

Panz. Fn. Ins. Germ. 62. 6.

Cimbex læta auctorum.

Habitat in Germania, Anglia. Prope Bristol bis obvia.

Variat ventre nigro aut medio aut toto subcroceo vel luteo.

Stirps 2.

Gen. PERGA.

Antennæ 6-articulatæ; articulo ultimo clavam efformante.

Labrum transversum subsemicirculare. *Mandibulæ* arcuatæ latæ, apice acutæ, latere interiore tenues, basin versus obtuse unidentatæ. *Palpi* filiformes. *Pterigostea submarginalia transversa* medio bullata. *Tibiæ* 4 posticæ latere interno spinula instructæ. *Calcarii* mediocres acuti simplices.—Genus artificiosum altero die sedulose elaborandum.

A. Alis anticis ante areolam marginalem non prominentibus. (Antennis articulo tertio duobus sequentibus longiore.)

a. *Areolis submarginalibus duabus primis confluentibus; ultima ad basin superne subacuminata: areola marginali elongata antice et postice acuminata.*

Sp. 1. *Perga polita*.

TAB. 148. Fig. 3.

P. brunneo-violascens polita nitens, thorace ferrugineo; disco maculâ squamis pleuris scutello capite antennis coxis tibiis tarsisque flavis, femoribus ventreque subvio-

lascente-ferrugineis politis, stigmatibus postice albido notatis, alis fulvescentibus; pterigostiis margine stigma-teque ferrugineis.

Long. corp. $10\frac{3}{4}$. Exp. alar. $22\frac{1}{2}$ lin.

Habitat in Australasia.

Mus. nost. ♀ *Francillon* ♂.

Mandibulæ saturate ferrugineæ, latere interiore apiceque nigris. Scutellum postice ferrugineo-brunneum.

b. *Areolis submarginalibus perfectis; ultima basi arcuato-emarginata; areola marginali elongata antice et postice acuminata.*

Sp. 2. *Perga bicolor.*

TAB. 148. Fig. 5.

P. pernigra, clypeo capitis lateribus, thorace ante squamas utrinque, scutello, tibiis, tarsis coxisque quatuor posticis albidis; tarsis tibiisque 4 posticis apice nigris, alis hyalinis apice fuscescentibus; pterigosteis nigris.

Long. corp. $7\frac{1}{2}$; exp. alar. $11\frac{3}{4}$ lin.

Habitat in Australasia.

Mus. MacLeay ♀. Mas adhuc latet.

Femora postica basi albida.

c. *Areolis submarginalibus perfectis; ultima basi recta; areola marginali ovata.*

Sp. 3. *Perga Latreillii.*

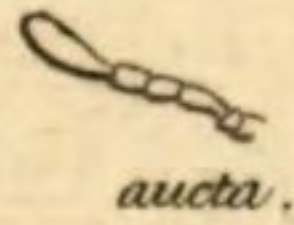
TAB. 148. Fig. 2.

P. luteo-ferruginea, capite, thoracis dorso tarsisque posticis basi nigris, pectore ventreque lutescentibus; clypeo vertice maculis, scutello, squamis, thoracis margine pleuris-que albidis, alis hyalinis; pterigosteis luteis.

PERGA.



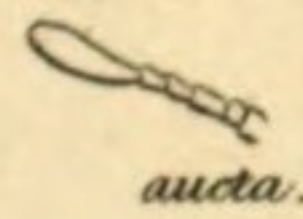
1



2



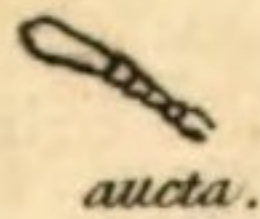
aucta.



3



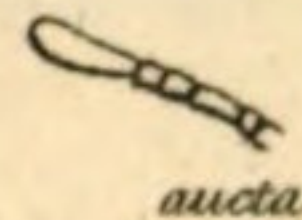
mag. nat.



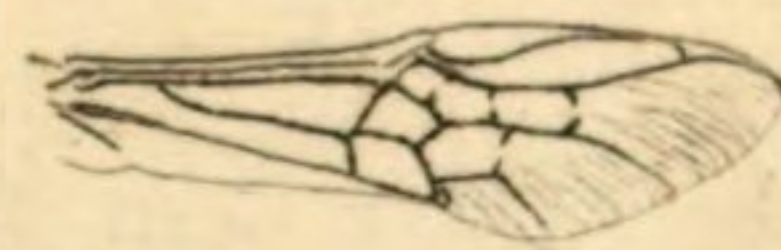
4



aucta.



5



aucta.

PTERYGOPHORUS.

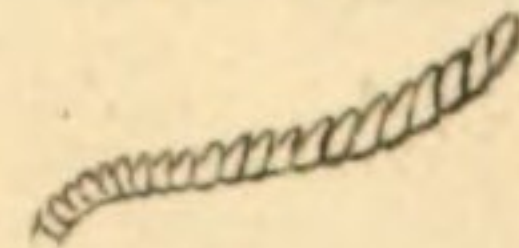


mag. nat.

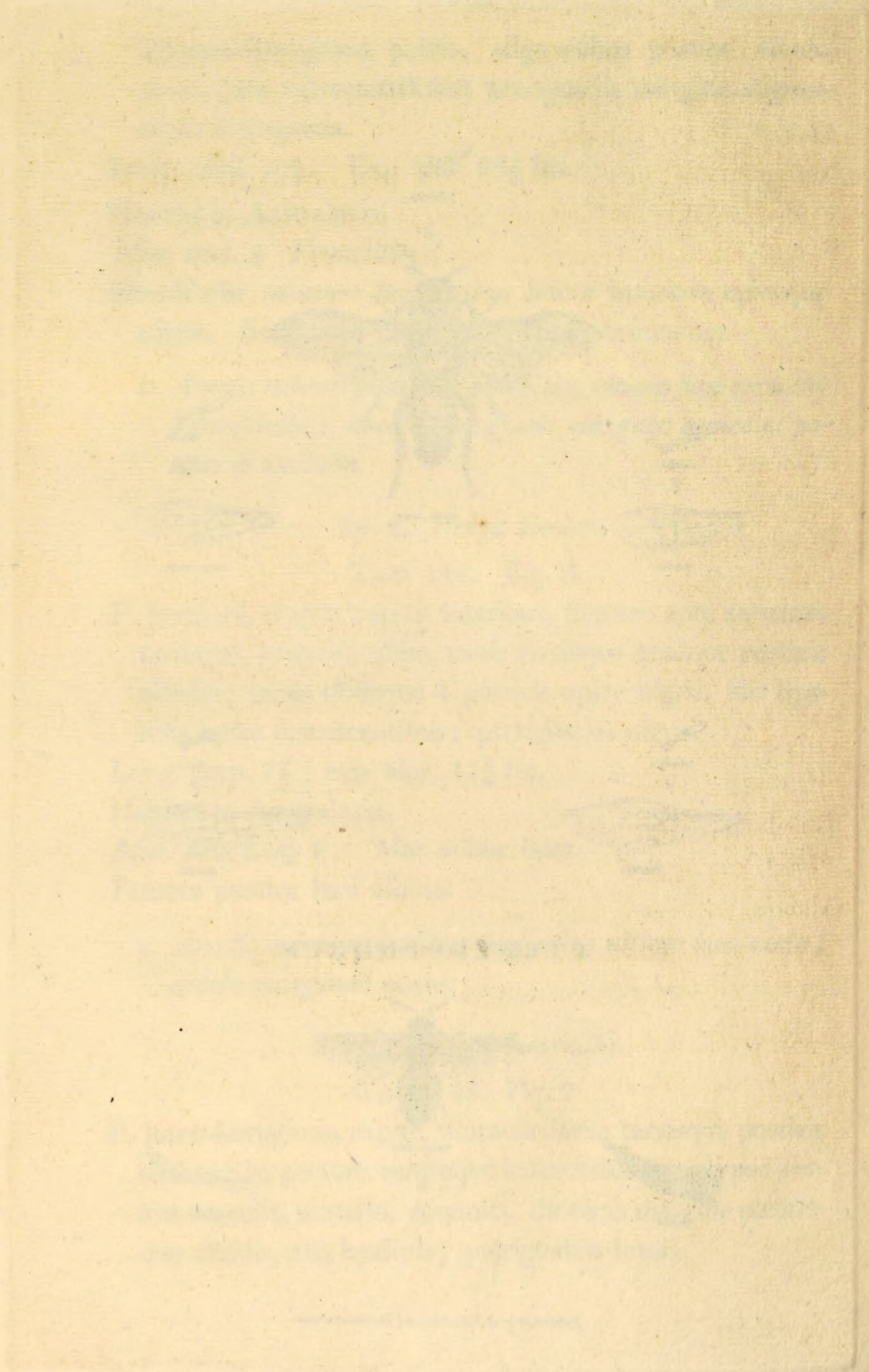
6



aucta.



aucta.



Long. corp. $5\frac{1}{4}$; exp. alar. $9\frac{1}{5}$ lin.

Habitat in Australasia.

Mus. Brit. ♂. Fœmina latet.

Abdomen articulis duobus primis basi utrinque nigris. Antennæ articulis duobus basilaribus nigris.

B. alæ anticæ ante areolam marginalem prominens: (areola submarginali ultima basi superne acuminata.)

a. *Areola marginali ovata: antennis articulo tertio duobus sequentibus longiore.*

Sp. 4. *Perga dorsalis.*

TAB. 148. Fig. 1.

P. cæruleo-chalybeata; clypeo, labro, antennis, pleuris macula triangulari, thoracis angulis anticis, scutello pedibusque subferrugineo-luteis, abdomine supra macula magna quadrata sericea flavida externe serrata, alis fulvescentibus; pterigosteorum margine stigmatumque ferrugineis.

Long. corp. $10\frac{1}{2}$; exp. alar. $21\frac{1}{2}$ lin.

Habitat in Australasia.

Mus. MacLeay, Nostr. ♂. Fœmina latet.

Mandibulæ luteo-ferrugineæ latere interno nigricantes.

Variat femoribus posticis apice nigris. Abdomen postice subangustatum.

b. *Areola marginali elongata angusta utrinque (postice præsertim) acuminata. Antennis articulis 3 et 4 subæqualibus; 3 longiore, articulo 5 præcedente brevior.*

Sp. 5. *Perga Kirbii.*

P. lutescens, capite thoraceque supra fusco-ferrugineis, ab-

dominis dorso violascente-ferrugineo, alis hyalinis; costa stigmatique ferrugineis.

Long. corp. 9; exp. alar. 18 lin.

Habitat in Australasia.

Mus. Kirby ♂.

Abdomen lineare.

c. *Areola marginali fere lineari antice obtusa postice acutiuscula. Antennis articulis 3, 4 et 5 fere æqualibus.*

Sp. 6. *Perga ferruginea.*

TAB. 148. Fig. 4.

P. ferruginea, abdomine pallidiore, labro, clypeo, fronte, antennis, tarsis omnibus tibiisque quatuor posticis luteis, alis subfulvescentibus.

Long. corp. $6\frac{1}{4}$; exp. alar. 12 lin.

Habitat in Australasia.

Mus. MacLeay, Nost. ♀. Mas latet.

Stirps 3.

Gen. PTERYGOPHORUS.

PTERYGOPHORUS. *Klug.*

Sp. 1. *Pterygophorus interruptus.*

Pt. luteus, capite thoracis medio lateribusque, pectore, ventre postice, abdominis dorso medio fascia interrupta femoribusque cyaneis, antennis totis tarsisque apice nigris, alis antice præsertim fuscescentibus.

β. fascia abdominali duplici.

Pterygophorus interruptus. Klug. Berl. Mag. 1814. 279.
t. 7. f. 3.

γ . abdomine macula utrinque loco fasciæ notato.

Long. corp. $4\frac{1}{2}$ — $6\frac{1}{2}$; exp. alar. 8—12 lin.

Habitat in Australasia.

Mus. MacLeay ♀ α . β . γ . *Kirby* ♀ β . *Nostr.* α et ♂ fascia integra.

Antennæ ♂ 22- ♀ 18-articulatae. Abdomen ♂ lineare apice rotundatum; ♀ medium versus latius apice gradatim acuminatum.

Sp. 2. *Pterygophorus cinctus*.

TAB. 148. Fig. 6. mag. nat. cum antennis ♂ et ♀ auctis.

Pt. atro-cyaneus, antennis basi, thoracis angulis anticis pleurisque, tibiis tarsisque, abdomine cingulis duobus (postico subtus interrupto) anoque flavidis, alis hyalinis antice fuscatis.

Pterygophorus cinctus. *Klug. Berl. Mag.* 1814. 278.

Long. corp. $4\frac{1}{2}$ —6; exp. alar. $8\frac{1}{2}$ — $13\frac{1}{4}$ lin.

Habitat in Australasia.

Mus. MacLeay, *Nost.* ♂ et ♀.

Antennæ ♂ 23-, ♀ 21-articulatae. Abdomen in utroque sexu subcylindraceum apice subacuminatum-rotundatum.

Sp. 3. *Pterygophorus cyaneus*.

Pt. cyaneus, thoracis angulis anticis tibiis tarsisque flavis, antennis nigris, alis hyalinis apicem versus antice fusciscentibus.

Long. corp. $4\frac{1}{4}$ — $5\frac{1}{2}$; exp. alar. $8\frac{1}{2}$ — $11\frac{3}{4}$ lin.

Habitat in Australasia.

Mus. MacLeay ♂ et ♀. *Kirby* ♀.

Antennæ ♂ 17-, ♀ 18-articulatae. Abdomen in utroque sexu subcylindraceum apice subacuminatum; ♂ rotundatum.

Stirps 4.

Gen. LOPHYRUS.

LOPHYRUS. *Latr., Klug., Leach.*PTERONUS. *Jurine.*HYLOTOMA. *Fabr.**

LARVA pedibus 16 spuriis.

SPECIERUM INEDITARUM DESCRIPTIONES.

Sp. 1. *Lophyrus Americanus.*

L. ♀ luteus abdomine saturatiore, thorace nigro-maculato, antennis nigris 19-articulatis, alis hyalinis; anticis basi præsertim subfulvescentibus.

Long. corp. 5; exp. alar. $8\frac{1}{4}$ lin.

Mus. Francillon, Nost. ♀.

Habitat in America Georgia.

Sp. 2. *Lophyrus Abbotii.*

L. ♀ ferrugineus, subtus capite pedibusque luteis, antennis nigris 17-articulatis, alis hyalinis pallidissime subfulvescentibus.

Long. corp. $3\frac{1}{2}$; exp. alar. 7 lin.

Mus. Francillon, Nost. ♀.

Habitat in America (Georgia).

Sp. 3. *Lophyrus Fabricii.*

L. ♀ luteus, thorace fusco-maculato, antennis nigris 16-articulatis, alis hyalinis pallidissime subfulvescentibus.

Long. corp. $3\frac{3}{4}$; exp. alar. $7\frac{1}{2}$ lin.

Mus. Francillon, Nost. ♀.

Habitat in America (Georgia).

Sp. 4. *Lophyrus compar*.

L. niger, tibiis tarsisque pallidis (antennis ♀ 16-articulatis),
 alis hyalinis.

Long. corp. 4; exp. alar. 8 lin.

Mus. Francillon, ♂ et ♀; *MacLeay* ♀.

Habitat in America (Georgia).

Stirps 5.

SYNOPSIS GENERUM.

Genera.

Alæ anticæ areola mar- ginali	{	ramulum emittente: an- tennæ ♂ ciliatæ	-	HYLOTOMA.
		terminali: antennæ ♂ bipartitæ ciliatæ	-	CRYPTUS.

SPECIERUM NOVARUM DESCRIPTIONES.

Gen. I. HYLOTOMA *.

Tibiæ 4 posticæ latere interno pòne medium spinula in-
 structæ.

LARVÆ pedibus 14 spuriis.

Sp. 1. *Hylotoma pilicornis*.

H. ♀ corpore atro-cærulescente, alis pallide nigricantibus,
 apice dilutioribus, pedibus nigris albido-vestitis, antennis

* *Hylotoma clavicornis*, Fabr. quæ in Museo Banksiano observavi, ab
Hylotoma femorali differt, antennis tibiis totaliter femoribusque apice
 flavis, abdomine apice supra ac infra nigro, macula fulvescente pone stigma
 minore.

elongatis nigris nigro-ciliatis, areola submarginali tertia apice superiore producta.

Long. corp. $2\frac{3}{4}$; exp. alar. 6 lin.

Prope Londinum apud sylvam Combe dictam bis observavit Dom. J. F. Stephens, qui mihi benevolenter communicavit.

Antennæ valde elongatæ graciles nigro-ciliatæ extrorsum vix crassiores. Mas latet.

Sp. 2. *Hylotoma Anglica*.

H. corpore atro-cærulescente, alis albidis fuscescente-subnebulosis, antennis pedibusque nigris; his albido-villosis.

Long. corp. 4; exp. alar. $7\frac{1}{2}$ lin.

Habitat in sylvis prope Londinum rarius. Dom. J. F. Stephens.

Antennæ MARIS quam in *H. Berberidis*, *atrata*, *pilicorni*, *enode*, *crassiores*; FEMINÆ structura proportionē *H. Berberidis*.

Sp. 3. *Hylotoma MacLeayi*.

H. subæneo-nigra, alis fuscescentibus apice dilutioribus, antennis femoribusque nigris, tibiis tarsisque flavescentibus apice subfuscescentibus.

Long. corp. $3-4\frac{1}{4}$; exp. alar. $7-8\frac{1}{2}$ lin.

Habitat in America (Georgia).

Mus. Britan. MacLeay.

Mas latet: Fœmina *Hyl. ustulatæ* affinis.

Sp. 4. *Hylotoma Klugii*.

H. subæneo-nigra, alis fuscescenti-fulvescentibus, tibiis tarsisque flavis.

Long. corp. $3\frac{3}{4}$; exp. alar. $7\frac{1}{2}$ lin.

Habitat in Anglia. Prope Londinum semel observavit

J. Standish. An sit *H. segmentariae* sexus alter?

Mus. nostr.

Sp. 5. *Hylotoma analis*.

H. capite thoraceque cærulescente-nigris, antennis atris, pedibus nigris, alis fuscescentibus apice dilutioribus, abdomine fulvescente-flavo apice nigro.

Long. corp. 4; exp. alar. 7 lin.

β. pedibus lutescentibus.

Habitat in America (Georgia). Fœmina latet.

Mus. nostr. α. MacLeay β.

Sp. 6. *Hylotoma Stephensii*.

H. atro-violascens, alis hyalinis costa pedibusque nigricantibus; his albido-villosis, femoribus quatuor posticis abdomineque flavis.

Long. corp. $2\frac{3}{4}$ — $3\frac{3}{4}$; exp. alar. 6— $8\frac{1}{2}$ lin.

Habitat in sylva Cantiana Darent. Detexit J. F. Stephens.

Antennæ MARIS longiores tenuiores quam in *H. femoralis*.

Pleura FÆMINÆ flava.

Sp. 7. *Hylotoma abdominalis*.

H. atro-cærulea, tibiis antennisque nigris, alis nitentibus fuscis, abdomine saturate flavo.

Long. corp. 4—6; exp. alar. 8— $10\frac{1}{2}$ lin.

Habitat in America (Georgia).

Mus. Brit. ♀. Mas adhuc latet.

Sp. 8. *Hylotoma erythrosoma*.

H. coccinea, antennis pedibusque nigris, alis nitentibus fuscis.

Long. corp. $4\frac{3}{4}$; exp. alar. $8\frac{1}{4}$ lin.

Habitat in America (Georgia).

Mus. Brit. Mas latet.

Sp. 9. *Hylotoma xanthothorax*.

H. violascente-nigra, pedibus obscurioribus, thorace toto flavo, alis infuscatis apice dilutioribus, antennis nigris.

Long. corp. $4\frac{1}{2}$; exp. alar. 8 lin.

Habitat in America Septentrionali? An *H. Americana* Fabr.?

Mus. Britan. ♀. Mas latet.

Sp. 10. *Hylotoma pectoralis*.

H. lutea, thorace coccineo-luteo, pectore capite pedibusque cyaneo-atris, antennis nigris.

Long. corp. 4; exp. alar. 10 lin.

Habitat in America Septentrionali?

Mus. Kirby ♀.

Gen. II. CRYPTUS.

Tibiæ omnes simplices.

Sp. 1. *Cryptus Villersii*.

C. flavus, capite antennis (thoraceque MARIS) nigris, alis fuscescente-hyalinis.

Tenthredo furcata. Vill. Ent. 3. 86. t. 7. f. 16. ♂. f. 17. ♀.

Panz. Faun. Ins. Germ. 46. 1.

Tenthredo Rubi Idæi. Illig. Ross. Fn. Etr. 2. 31.

Hylotoma furcata. Fabr. Syst. Piez. 22. 8.

Latr. Gen. Ins. 3. 231.

Spinol. Ins. Lig. 1. 50.

Klug. Berl. Mag. 1814. p. 301.

Cryptus furcatus. Jur. Hymen. 51.

♀ *Hylotoma angelicæ. Fabr. Syst. Piezat. 25.*

Klug. Berl. Mag. 1814. p. 302.

Tenthredo melanocephala. Panz. Fn. Ins. Germ. 64.

Long. corp. $2\frac{3}{4}$ — $3\frac{1}{2}$; exp. alar. 6 — $7\frac{1}{2}$ lin.

Habitat in Gallia, Germania, Italia (et in Anglia rarius).

OBS. ♂ Pedes basi nigri: ♀ Pectus medio nigrum.

Sp. 2. *Cryptus Klugii.*

C. flavus, thorace croceo-flavo (MARIS disco nigro), capite
antennis pedibusque (anticis exceptis) anoque nigris, alis
fuscescente-hyalinis.

Long. corp. $2\frac{3}{4}$; exp. alar. $6\frac{1}{4}$ lin.

Habitat in America (Georgia).

Mus. Francillon, nostr. ♂ et ♀.

OBS. ♂ antennæ ciliis valde elongatis vestitæ.

Sp. 3. *Cryptus pallipes.*

C. æneo-niger, abdomine obscuriore, antennis nigris, tibiis
tarsisque pallidis, alis hyalinis fascia obscura sub stigmate
pallide fuscescente.

Long. corp. $2\frac{1}{2}$; exp. alar. 5 lin.

Habitat in Anglia rarissime: semel in sylva Combe dicta
prope Londinum legit Dom. J. King, qui mihi summa
benevolentia communicavit. ♀ latet.

Stirps 6.

SYNOPSIS GENERUM.

Genera.

Alæ anticæ areolis	{	4 submarginalibus; 1 marginali: antennæ	
		9-articulatæ	- - - 1. MESSA.
		4 submargina-	} antennæ 10-articulatæ 2. ATHALIA.
		libus; 2 mar-	
		ginalibus:	} antennæ 9-articulatæ 3. SELANDRIA.
		3 submarginalibus; 2 marginalibus: an-	
		tennæ 9-articulatæ	- - - 4. FENUSA.

Gen. I. MESSA.

Sp. 1. *Tenthredo hortulana*. *Klug.*

Gen. II. ATHALIA.

TENTHREDO, FAM. I. *Klug.*

Tenthredines: 1. *Spinarum*, 2. *Rosæ*, 3. *annulata* *Klug.*

Gen. III. SELANDRIA.

TENTHREDO, FAM. II†. *Klug.*

Tenthredines: 1. *serva*, 2. *cinereipes*, 3. *ovata* &c. *Klug.*

Gen. IV. FENUSA.

Tenthredo: 1. *pumila* *Klug.*

Sirps 7.

SYNOPSIS GENERUM.

		1. ALLANTUS.
	{ quarto longiore -	2. TENTHREDO.
	{ et quarto æqualibus	
		3. DOSYTHEUS.
	{ quarto longiore -	4. DOLERUS.
	{ et quarto æqualibus	
		5. EMPHYTUS.
	{ tertio et quarto	
	{ æqualibus	
Alæ anticæ	4: antennæ articulo tertio	
areolis sub-	{ brevisima; antennæ	
marginalibus	{ articulo tertio	
	3: prima	
	{ secunda non brevior; antennæ articulis	

Gen. I. ALLANTUS.

ALLANTUS. *Panz., Jurine.*

Tenthredines Allanti *Klug.* 1. semicincta, 2. notha,
3. zonata &c.

Gen. II. TENTHREDO.

Tenthredines Allanti *Klug.* 1. Rapæ, 2. dimidiata, 3. nas-
sata &c.

Gen. III. DOSYTHEUS.

Tenthredines Doleri *Klug.* 1. Eglanteriæ, 2. Junci &c.

Gen. IV. DOLERUS.

DOLERUS. *Jurine, Latreille, Leach.*

TENTHREDO (Dolerus) *Klug.*

Doleri *Jurine.* 1. opacus, 2. Gonagra &c.

Gen. V. EMPHYTUS.

TENTHREDO (Emphytus) *Klug in litteris.*

Tenthredines Emphyti *Klug.* 1. cincta, 2. cerea, 3. ti-
bialis, &c.

Stirps. 8.*

Corpus breve, MARIS postice subattenuatum. Antennæ
ciliatæ medium versus gradatim crassiores apice grada-
tim attnuatæ.

From the shortness of the body, the one marginal cell,
&c., it is probable that this is nearly allied to the fourth
stirps.

* Genus *Pristiphora* Latr. mihi invisum *Cladio* forte affine.

SYNOPSIS GENERUM.

		<i>Genera.</i>	
Tarsi	postici articulo primo elongato compressissimo. Areolæ 4 submarginales - - - -	-	1. CRÆSUS.
	omnes simplices :	{ 4 -	- 2. NEMATUS.
	areolæ submarginales	{ 3 -	- 3. CLADIUS.

Gen. I. CRÆSUS.

Antennæ in utroque sexu corpore longiores, simplices (FEMINÆ præsertim) brevissime ciliatæ.

Sp. 1. *Cræsus Septentrionalis*.

Nematus Septentrionalis. Jur., Latr., Leach.

Gen. II. NEMATUS.

Antennæ corpore longiores MARIS, articulis apice sæpe incrassatis aut interne subproductis.

* *Antennæ* MARIS mediocriter ciliatæ ; articulo tertio basi simplici.

Nemati : 1. niger, 2. luteus, 3. lucidus &c.

** *Antennæ* MARIS ciliis elongatis ; articulo tertio basi infra corniculato.

Hujus divisionis typum observavit Clarissimus Monographiæ Apum Angliæ auctor, qui mihi communicavit. Species duas indigenas possideo,

Gen. III. CLADIUS.

Antennæ corporis longitudine aut vix longiores; **MARIS** ciliis elongatis; articulis 3, 4, et 5 apice supra valde, 6 et 7 (hoc præsertim) paulo productis; articulo tertio basi infra corniculato.

Cladius difformis *Latr.*

Habitat in Europa. In Anglia apud Combe Wood et prope Bristol.

Stirps 9.

SYNOPSIS GENERUM.

Genera.

Tibiæ 4 posticæ latere infero ultra medium cal-				
caribus 2 geminis instructæ	-	-	-	1. TARPA.
Tibiæ 4 posticæ latere infero medium versus				
calcare unico et pone medium calcaribus 2				
geminis instructæ	-	-	-	2. LYDA.

Gen. I. TARPA.

TARPA. *Fabricius, Klug.*

MEGALODONTES. *Latreille, Spinola, Leach.*

DIPRION. *Schrank.*

OBS. Abdomen articulo primo postice emarginato membranaceo; membrana pallida.

Sp. 1. *Tarpa Fabricii.*

T. atra, capite maculis duabus inter oculos margine postico utrinque, thorace angulis anticis strigisque duabus prope scutellum, pleuris puncto, abdomine membrana fasciis duabus, puncto utrinque, ano, ventreque fasciis albidis,

antennis ferrugineis ; articulis duobus primis atris, pedibus luteis, coxis omnibus femoribusque quatuor anticis basi atris.

Long. corp. 7 ; exp. alar. $12\frac{1}{4}$ lin.

Habitat

Mus. nost.

An *T. plagiocephalæ* *Fabr. Syst. Piezat.* 2. varietas major ?

Calcaria postica omnia atra. Fascia secunda abdominalis medio attenuata.

Sp. 2. *Tarpa Klugii*.

T. atra, capite maculis tribus inter oculos margine postico bis interrupto, thorace margine antico interrupto strigisque duabus prope scutellum, pleuris puncto, abdominis articulo primo toto articulisque 4, 5, 6, 7, et 8, margine postico ventreque fasciis duabus flavis, antennis ferrugineis ; articulo secundo apiceque nigris, pedibus testaceis, tibiis flavis, femoribus quatuor anterioribus basi atris.

Tenthredo cephalotes. *Fabr. Ent. Syst.* 2. 111.

Tarpa cephalotes. *Fabr. Syst. Piezat.* 19.

Tarpa plagiocephala. *Klug. Berl. Mag.* 1808. 270. t. 8. f. 1.

Long. corp. 5— $5\frac{3}{4}$; exp. alar. 10—11 lin.

Habitat in Germania (in Anglia apud Bristol rarissime).

Mus. nost.

Coxæ omnes et calcaria postica atra.

Sp. 3. *Tarpa Panzeri*.

T. atra, capite maculis tribus inter oculos, margine postico bis interrupto, thorace angulis anticis strigis duabus ante medium et duabus prope scutellum, pleuris puncto, abdominis membrana segmentis margine postico ventrequ fasciis pedibusque flavis; abdominis fasciis duabus primis interruptis, femoribus quatuor anticis basi nigris, tarsis lutescentibus, antennis ferrugineis; articulo primo flavo.

Tenthredo cephalotes. *Panz. Fn. Ins. Germ.* 62. 7. ♂. 8. ♀.

Tarpa cephalotes. *Klug. Berl. Mag.* 1808. 269.

Habitat in Germania. In Anglia apud Woodland prope Plymouth a meipso lecta.

Mus nost. ♂ et ♀. *Stephens* ♀.

T. Klugii paulo minor.

Gen. II. LYDA.

LYDA. *Fabr., Spinol., Klug.*

PAMPHILIUS. *Latreille, Leach.*

CEPHALEIA. *Jurine.*

PSEN. *Schrank.*

Larva pedibus spuriis nullis.

Lydæ *Klug.* 1. *Betulæ* 2. *Erythrocephala* &c.

XXIX. *On the Rhipiptera of Latreille, an Order of Insects named by Kirby Strepsiptera.*

Xenos, the genus serving as the type of this singular Order of Insects, was discovered by Rossi, who referred it without hesitation to the *Hymenoptera*, and placed it next to *Ichneumon*. Another genus of the same order was found by Kirby, and was described in his celebrated *Monographia Apum Angliæ* under the name of *Stylops*, with expressions of doubt as to its systematic situation. Latreille soon after received from De Brebisson a species of *Stylops*, and at the end of his *Genera Insectorum et Crustaceorum* observes that it seems to disturb our entomological systems, not being referable to any of the established orders. Professor Peck detected a new species of this group in America, and communicated it to Kirby, who considered it to constitute with his *Stylops* a peculiar order of insects, on which he gave to the Linnæan Society of London, in 1811*, a dissertation.

I adopted the characters that were laid down by this learned entomologist, as well as the name *Strepsiptera*, by which it was designated. Since then, Latreille has convinced me that the supposed elytra are but moveable processes attached to the anterior part of the thorax ; whereas true elytra arise from the second segment of the trunk, and always more or less cover the wings, which these parts do not touch. Anxious to become acquainted with all the characters of the order, I commenced an examination of

* Vol. xi.

the mouth, and was soon convinced that the parts of it were far from being obsolete ; but fearing to undertake the dissection, I submitted the specimen to the inspection of Savigny, from whose exact and almost infallible hand and eye, I felt confident of gaining the desired information, the result of which shall now be given.—He observed, that the mouth contains the whole of the usual parts which, under various modifications, exist in all insects : the mandibles are perfectly distinct from and unconnected with the maxillæ ; the maxillæ are inserted behind and somewhat below the mandibles, whose base they conceal ; and the articulation of the labrum is very evident, from its semi-transparency.

RHIPHIPTERA.

STREPSIPTERA. *Kirby, Leach.*

RHIPIPTERA. *Latreille.*

DIPTERA RHIPIDOPTERA. *Lamarck.*

CHARACTER ORDINIS.

Os labro, mandibulis maxillis et labio instructum.

Antennæ bipartitæ.

Thorax utrinque antice ad pedum anticorum basin processu mobili instructus.

Alæ duæ membranaceæ longitudinaliter plicatiles ; *pteri-gostiis* radiantibus.

LARVA in Hymenopterorum abdomine latet parasitica.

PUPA coarctata inter abdominis segmenta affixa.

I have seen but one genus of this order, viz. *Stylops*, of which the following is the character.

1. The first part of the report is a general
statement of the facts of the case.
2. The second part is a statement of the
evidence in support of the facts.
3. The third part is a statement of the
conclusions reached by the court.
4. The fourth part is a statement of the
reasons for the conclusions reached.
5. The fifth part is a statement of the
disposition of the case.
6. The sixth part is a statement of the
costs of the case.
7. The seventh part is a statement of the
fees of the court.
8. The eighth part is a statement of the
fees of the attorneys.
9. The ninth part is a statement of the
fees of the witnesses.
10. The tenth part is a statement of the
fees of the clerks.
11. The eleventh part is a statement of the
fees of the sheriff.
12. The twelfth part is a statement of the
fees of the jailer.
13. The thirteenth part is a statement of the
fees of the coroner.
14. The fourteenth part is a statement of the
fees of the constable.
15. The fifteenth part is a statement of the
fees of the marshal.
16. The sixteenth part is a statement of the
fees of the clerk of the court.
17. The seventeenth part is a statement of the
fees of the clerk of the jury.
18. The eighteenth part is a statement of the
fees of the clerk of the grand jury.
19. The nineteenth part is a statement of the
fees of the clerk of the peace.
20. The twentieth part is a statement of the
fees of the clerk of the county court.
21. The twenty-first part is a statement of the
fees of the clerk of the district court.
22. The twenty-second part is a statement of the
fees of the clerk of the supreme court.
23. The twenty-third part is a statement of the
fees of the clerk of the state court.
24. The twenty-fourth part is a statement of the
fees of the clerk of the federal court.
25. The twenty-fifth part is a statement of the
fees of the clerk of the United States court.
26. The twenty-sixth part is a statement of the
fees of the clerk of the United States district court.
27. The twenty-seventh part is a statement of the
fees of the clerk of the United States circuit court.
28. The twenty-eighth part is a statement of the
fees of the clerk of the United States supreme court.
29. The twenty-ninth part is a statement of the
fees of the clerk of the United States court of appeals.
30. The thirtieth part is a statement of the
fees of the clerk of the United States court of claims and
pensions.



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STYLOPS.

STYLOPS. Kirby, Latreille, Leach, Lamarck.

CHARACTER ESSENTIALIS.

Antennæ ramis compressis; superiore articulo,

Tarsi 4-articulati; articulo ultimo fisso.

Character Oris (observante Savigny).

“*Labrum* coriaceum porrectum mobile a basi ad apicem sensim angustius.”

“*Mandibulæ* maxillis longiores sub labro decussantes corneæ angustissimæ lineares subarcuatæ apice acutissimæ.”

“*Maxillæ* magnæ coriaceæ cylindraceæ lobo conico subtus subconcavo, basi externe palpigero instructæ: *palpi* uniarticulati semi-membranacei ovali-oblongi lobo duplo majores.

“*Labium* coriaceum paululum porrectum, subtus carinatum, basi latum; *lingula* nulla terminali nec *palpis* discernendis.”

Savigny in litteris.

Sp. 1. *Stylops Kirbii*.

TAB. 149.

As this is the only species that I have had an opportunity to examine, it will be ridiculous to attempt a specific character; and since it does not agree with the figures of *Stylops Melittæ* of Kirby, I have no hesitation in naming it after the first of British entomologists.

A magnified representation of a leg is given at the bottom of the Plate.

Observations.

Kirby's American *Xenos* differs generically from *Stylops* in having the branches of its antennæ nearly rounded and without joints, and in having the last joint of its tarsi (which are likewise four-jointed) entire.

Since writing the above, I have received from my friend Clairville, a paper by Jurine on the *Xenos Vesparum* of Rossi; from which it would appear that this insect likewise is referable to a very different genus from the American *Xenos*. The abdomen of Jurine's insect is pedunculated; the processes attached to the anterior segment of the thorax are elongate; the wing-bones are differently disposed; and, what is of still greater importance, the tarsi are described to be composed of five joints.

Jurine's figure is very badly executed, the two sides being dissimilar; but from his description I have little doubt that a third genus will soon be determined to belong to this order.

XXX. *Synopsis of the Orders, Families, and
Genera of the Class Cephalopoda.*

CEPHALOPODA.

SYNOPSIS ORDINUM.

Ordo I. OCTOPODA.

Pedes 8. Corpus apterum.

Genera.

Pedes antliis simplici serie instructi, con-
similes - - - - - 1. ELEDONE.

Pedes antliis duplici serie alternis in-
structi, consimiles - - - 2. POLYPUS.

Pedes antliis duplici serie alternis in-
structi: par superius apice alatum - 3. OCYTHOE.

Ordo II. DECAPODA.

Pedes 10: par quartum aliis multo longius. Corpus pte-
ratum.

Fam. I. SEPIOLIDEA.

Corpus ovale bursiforme. Pinnæ apice saltem liberæ.
Collum supra alto-frenatum aut cum sacco coalitum.
Os stiliforme.

Genera.

Pinnæ laterali-dorsales distantes. Pedes
ordinarii æquales. Collum postice cum
sacco coalitum. Latera freno parvo
instructa - - - - - 4. SEPIOLA.

Pinnæ terminales approximatae apice li-
beræ. Pedes ordinarii inæquales:

par superius brevissimum : paria 2 et 3 gradatim longiora : par 5 pari secundo haud longius. Collum postice et utrinque antice alto-frenatum - *Genera.* 5. CRANCHIA.

Fam. II. SEPIIDEA.

Corpus elongatum postice acuminatum.

Pinnæ apice coalitæ. Collum liberum.

Pedes inæquales : par superum brevius :

paria 2 et 3 gradatim longiora ; par 5

pari 2 paulo longius. Os depressum.

Corpus depressum. Pinnæ longæ - 6. SEPIA.

Corpus teretiusculum. Pinnæ mediocres 7. LOLIGO.

SYNONYMA GENERUM, &c.

Ordo I. OCTOPODA.

Pedes longitudine fere æquales, a basi ad apicem interne antliis instructi ; basi membrana coaliti. Saccus postice cum collo coalitus. Corpus ovale bursiforme, infra et utrinque frenatum : freno inferiore ad sacci marginem fere attingente ; frenis lateralibus parvis.

Gen. I. ELEDONE.

Ἐλεδὼν'NH *Aristotelis.*

Sp. 1. *Eledone moschata.*

Le Poulpe musqué. *Lam. Mém. de la Soc. d'Hist. Nat.*

Habitat in Mediterraneo mari.

Gen. II. POLYPUS.

ΠΟΛΥΠΟΥΣ *antiquorum.*POLYPUS. *Rondeletii.*OCTOPUS. *Lamarck, Cuvier.*

Ad hoc genus pertinent 1. *Sepia octopodia* Linn.; 2. *S. rugosa* Bosc. et

3. *Polypus longipes.*

P. corpore elongato-ovali glabro griseo nigro-punctulato, pedibus longissimis gracilibus; antliis magnis prominulis.

Habitat

Mus. nost.

Gen. III. OCYTHOE.

OCYTHOE. *Rafinesque, Blainville, Leach.*ARGONAUTA. *Cuvier, Shaw, &c.*Sp. 1. *Ocythoë Cranchii.*

O. pedibus mediocribus; superioribus ala spongiosa.

Ocythoë Cranchii. Leach Phil. Trans. 1817.

Habitat in mari Africano Guineensi.

*Mus. Brit.*Sp. 2. *Ocythoë antiquorum.*

O. pedibus elongatis; superioribus ala membranacea.

*Argonauta Argo. Shaw Nat. Miscel.**Mus. Brit.*

Ordo II. DECAPODA.

Pedes ordinarii a basi ad apicem interne antliis pedunculatis instructi: pedum par quartum basi simplex, apice dilatatum interne planum antliis pedunculatis instructum.

Gen. IV. SEPIOLA.

SEPIOLA. *Rondeletii*.

Sp. 1. *Sepiola Rondeletii*.

Sepia Sepiola. *Linné*.

Habitat in mari Europæo.

Gen. V. CRANCHIA.*

Sp. 1. *Cranchia scabra*.

C. sacco tuberculato scabro; tuberculis duris scabriusculis.
Mus. Brit.

Sp. 2. *Cranchia maculata*.

C. sacco lævi pulcherrime nigro maculato; maculis ovatis distantibus.

Mus. Brit.

Gen. VI. SEPIA.

ΣΗΠΙ'Α *antiquorum*.

SEPIA *auctorum*.

Sp. 1. *Sepia officinalis*.

Sepia officinalis. *Linné*.

Habitat in mari Europæo.

Gen. VII. LOLIGO,

LOLIGO. *Plinii, Lamarck, &c.*

* Ad hoc genus forte pertinet *Loligo cardioptera* Peron.

* *Brachia omnia antliis simplicibus pedunculatis.*

Sp. 1. *Loligo parva.* Rondel. 508.

** *Brachia omnia antliis hamatis: supplementaria antliis inferioribus simplicibus pedunculatis.*

Sp. 2. *Loligo lepturo.*

L. brachiis supplementariis hamis liberis, cauda abrupta tenui.

Mus. Brit.

Corpus et brachia externe lævia tuberculis nonnullis in lineis longitudinalibus interruptis digestis.

Sp. 3. *Loligo Smythii.*

L. brachiis supplementariis hamis infra membrana instructis, cauda gradatim attenuata.

Mus. Brit.

Corpus et brachia externe tuberculata; tuberculis purpureis apice albidis.

*** *Brachia ordinaria antliis simplicibus pedunculatis: supplementaria antliis hamatis; inferioribus pedunculatis simplicibus.*

Sp. 4. *Loligo Banksii.*

L. pedibus ordinariis antliis globosis, pinnis rhombum efformantibus.

Mus. Brit.

* Brachia omnia eorum simplicibus pedunculatis

Sp. 1. *Loligo parva*. Thoms. 1808.

* Brachia omnia eorum simplicibus pedunculatis

Sp. 2. *Loligo parva*

I. brachia supplementaria hanc libellam eadem

Alas. Br. 1. 48.

Corpus et brachia externa hanc tuberculis nonnullis in lineis longitudinalibus interruptis digestis.

Sp. 3. *Loligo parva*

I. brachia supplementaria hanc libellam eadem

Alas. Br. 1. 48.

Corpus et brachia externa hanc tuberculis nonnullis in lineis longitudinalibus interruptis digestis.

* Brachia omnia eorum simplicibus pedunculatis

Sp. 4. *Loligo parva*

I. pedibus ordinatis eorum globosis, pinnis rhomboidis et

Alas. Br. 1. 48.

COLLEL. IV.

Sp. 5. *Loligo parva*

* Brachia omnia eorum simplicibus pedunculatis

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